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VOL. 1—NO. 1. TORONTO, AUGUST 1, 1880 PRICE FIVE CENTS

INTRODUCTORY.

In bringing before the public a new journal, specially devoted to lumbering interests, and incidentally to milling, manufacturing and mining, as being kindred forms of the development of the national industry, there is little apology needed. As there are special branches in trade, so there are special departments in journalism. The daily paper, morning and evening, rushes forth without regard or respect for any interest, but with an intention well formed to treat all fairly; and the result is a little general information here, a little special pleading there, and a large mass of the general gossip concerning things that occur upon the streets or elsewhere, but have very little practical interest for the business man, no matter what may be the branch in which he is engaged.

It is for this reason that specialists in journalism have in many cases achieved such remarkable success. Not to speak of the religious journals, whose existence depends on the zeal of the sects, there are others, such as the *Bullionist*, the *Scientfic American*, the *Grocer*, &c. &c., that represent special interests in trade and science, and they all receive a more or less generous support, from their own class—from those who are interested in the specialties they represent.

Though much attention has been given to the lumbering interests by the press of Canada, yet it is felt that a special organ, which would concentrate the views of those who understand the business, and present them to the public in a way in which they could be fairly discussed, with a full comprehension of the value of the vast interests involved, would not merely serve those who are engaged in the trade, and their employees, but also the country at large. Let it be remembered that the Lumbering interest is the second greatest in Canada—being next to the agricultural. Now, mining, milling and general manufacturing, naturally take a secondary and subservient position, as being dependent on the success and progress of the two great national industries—agriculture and lumbering. In proportion as they prosper, so will be the general prosperity of the country.

It would be out of place in this "Introductory" to enter into details as to the vast resources of Canada as a timber producing country. It has not unfrequently been sneered at as a "wooden country, and the taunt is neither without foundation, nor is it one to be ashamed of. Canada is indeed a wooden country, but its woods are fast disappearing, and one of the prime elements of its early growth, is being ruthlessly destroyed by the old style of management on the part of the government, and the reckless indifference of the people. It will be the duty of the LUMBERMAN to point out the injuries annually inflicted on the wooden wealth of Canada, by reckless tree-felling, and the still more reckless starting of forest fires, whether by sportsmen or settlers. Even in the latter particular, our journal may, by assisting in arousing public opinion, be the means of saving millions of dollars to the country in a single year.

But we are not ignorant of the great responsibility of starting this journal. Devoted as it is to a special class of operators, it must mainly look to them for support. It has not the whole of the reading community to appeal to directly, and hence must depend for success on the earnest and liberal support of those in whose interest it is published. Lumbermen, as a class, are noted for their public spirit and liberality, and we freely trust to their generous support as well as to that of lumber dealers generally. Nothing shall be wanting on our part to make this journal a full and complete record of the lumber business, and all that relates to the trade in Canada. To this end the latest market reports, the contributions of trustworthy correspondents, trade circulars, etc., will be freely used, to give our readers the best, the earliest, and the most reliable information that can be obtained, concerning the important branch of business to which the journal will be especially be devoted; while the mining, the milling, and the manufacturing interests will receive attention proportionate to their great claims on the public.

In short, it will be our endeavour to make the LUMBERMAN worthy of its title in every respect; and, while giving special attention to the great staple industry to which it is devoted, it will also furnish a carefully selected amount of general reading that will make it a welcome visitor in every family.

Advertisers, especially those dealing in mill, mining, and lumbering supplies and machinery, will find the LUMBERMAN a very favourable medium of reaching their customers, as it will circulate among these classes, and receive more attention from them than they have the time or inclination to bestow on a general newspaper.

Watches.

Watches, by reason of their fragile construction, and the variations to which they are liable, can after all only obtain a limited perfection in their performance; therefore, we must not be astonished to find them subject to certain variations. These variations, which are easy to correct, need not prejudice the quality of a watch, as will be proved by the following example. Two watches, we will suppose, have been put to the same time by an excellent regulator. At the end of a month, one of these watches is a quarter of an hour too fast; the other is exactly right to time. To which of these two watches would we give the preference? Perhaps to the one which is exactly right. But in making such a choice, we nevertheless incur the risk of abandoning a good watch for a bad one. The first watch, has, we assume, gained 30 seconds a day; and according to this rate, it has gained a quarter of an hour in 30 days. What must be done to make this watch go well? Alter the regulator inside from fast to slow, or get a careful watchmaker to do it for you, thereby altering its daily rate. Let us now admit that the other watch has been affected during a month by irregular going, which has occasioned it sometimes to gain, at other times to lose to a certain extent daily. It may easily occur that at the end of a month this gaining and losing compensate each other, and by this means the watch indicates the exact hour at the time we look at it. Such a watch can never be relied upon. The fact is that a watch which gains in a regular manner or loses in a regular manner is superior to any whose variation is uncertain, and where its variation comes to be familiar, the little companion may vie with the most delicately adjusted ship's chronometer. A skilful watch-maker one day thus reasoned with a customer who complained of his watch. "You complained," said he, "that your watch gains a minute a month. Well, then, you will congratulate yourself when you have heard me. You are aware that in your watch the balance, which is the regulator, makes five oscillations every second, which is 432,000 a day: so that your watch, exposed to all the vicissitudes which heat and cold occasion it, the varying weight of the air, and the shaking to which it is subjected, has not varied more than a minute a month, or two seconds a day. It has only acquired with each vibration of the balance a variation of the two hundred and sixteen thousandth part of a second. Judge then what must be the extreme perfection of the mechanism of this watch!" A watch cannot go for an indefinite period without being repaired or cleaned. At the expiration of a certain time, the oil dries up, dust accumulates, and wear and tear are the inevitable results to the whole machinery, the functions becoming irregular, and frequently ceasing to act altogether. A person possessing a watch of good quality, and desirous of preserving it as such, should have it cleaned every two years at least. But care should be taken to confide this cleaning or repairing to careful hands; an incapable workman may do great injury to a watch even of the simplest construcion.

The Earth's Population.

In the new issue (No. 6.) of Behm and Wagner's well-known "Bevolkerung der Erde" there are several points of fresh interest. Since the last issue, about two years ago, the population would seem to have been increased by about 17,000,000, the present population of the earth, according to Behm and Wagner, being 1,456,000,000, as against 1,439,000,000 two years ago. This, however, can not be set down to absolute natural increase, much of the addition being, no doubt, the result of new and more accurate statistics. The new issue has, for example, to take account of several new censuses, some of them in countries where the population has not been accurately counted for many years, if at all. We have, for example the census of Spain in 1877; Portugal, 1878; Greece. 1879; Bosnia and Herzegovina, 1879; New Zealand, 1878; Peru, 1876; Denmark, 1880, besides several smaller places. The total population is divided among the continents as follows: Europe, 315,929,000, or at the ratio of 32.5 per square kilometre; Asia, 834,707,000, or 187- per square kilometre; Africa, 205,579,00., or 6.9 per square kilometre; America, 950 495,500, or 2.5 per square kilometre; Aus, tralia and Polynesia, 4,031,000, or 0 4 per square kilometre; the remainder, 82,000, belong to the north polar region, mostly Iceland and Greenland. Although the census of the United States has been taken some months since, and a few of the data oozed out in an irregular fashion, Herren Behm and Wagner have not made any use of the results, wisely preferring to await official statistics. They calculate that the census ought to give a result of at least 47,000,000. The editors have also given a fresh planimetrical calculation of the area of Africa, yielding a result of 29,383,390 square kilometres. Of this area about six and a third milli n are forests and culture land, the same area savannahs and scattered woods, 1,500,000 bush, 4,290,000 steppe, and 10,-500,000 desert. This last item seems appalling, but it should be remembered that much of this desert may be reclaimable, and that it includes large areas of fertile oases. A new p animetric calculation of the area of South America yields the result of 16,732,-128 square kilometres, differing greatly from the sum of the official areas given by the South American governments.

Mr. E. B. Eddy, of Ottawa, Ont., has taken a ten years' lease of the Lovejoy premises in Odgensburg, and will at once transfer them into a match and box factory. While there on Friday he let a contract of the value of $1,200 to put the buildings into proper shape.

In E. C. Cane's mill, Gravenhurst, on Tuesday, Neil McMillen sawed, on one of Goldie & McCullough's machines, 42,600 of 16-inch shingles, within eleven hours. The shingles were jointed by Archibald McKinnon, and Edward Collis packed 32,900.

The Autumn Woods.

AND THE HOUSEHOLD ADORNMENTS WHICH THEY PROVIDE— PREPARING FERNS AND MOSSES.

(Philadelphia Times.)

Ferns become every year more popular for purposes of household decoration. Growing or cut, freshly gathered or pressed, the uses to which they are applied are numberless. It is a safe plan to gather them whenever you can get them, but those who can choose their time to do so usually prefer August or early September, since at this time the ferns are in full maturity and have not yet begun to fade.

In going fern hunting it is wise to take a large book, such as an atlas or a music portfolio, along in which to lay the more delicate specimens as soon as they are gathered; the commoner varieties—such as the ordinary bracken bush, the evergreen fern—may be easily taken home to be pressed, by wrapping them in newspaper with a wet fold around the stems to keep them from wilting. Those which are to be dug up, root and all, for transplanting should be placed as carefully as possible in a basket.

At the close of every excursion the ferns which are to be pressed should without loss of time be transferred to the drying paper. Seated at a convenient table the collector begins her work, her pile of ferns at one side of her and her paper at another. Plenty of paper and two flat, smooth boards are the materials required. Books on the subject advise stout blotting paper, but strong, soft newspapers, such as the *Times* for instance, make an excellent substitute at far less cost. Number one board is laid down; on this several sheets of paper—the more the better if paper is plentiful—and on them the fern is laid out as nearly as possible in the natural position, any twisting into shapes which the fronds would not have assumed in life being avoided. Over it a single sheet of paper is laid, and while with the right hand the plant is being spread out, with the left the paper is being simultaneously smoothed over it, immediately a few more sheets are laid over it and the process repeated with additional specimens until the pile is sufficiently high; then it is topped with the second board and the bundle deposited with a forty or fifty pound weight on the top of all. Bricks make good weights, and they can be so distributed as to make the pressure bear equally on all parts at once; but any weight—a large stone, for instance—will do very well; or you may put the boards under your trunk. If a great many ferns are to be dried, another set of boards and papers may be used, but one is sufficient for quite a number. Next day the collector must "change her papers." The pile is reversed, and the top board laid down on the table, with a sheet or two of dry paper on the top of it. Then the half-limp, flattened fern is carefully transferred to it, and the process repeated until the whole of yesterday's gatherings are once more in dry sheets, and the weights on top of them again. The damp paper is then laid out in the sun or suspended on a cord in the kitchen or other warm place to dry, and in a short time is ready for use. How often the changing of papers must be repeated, depends upon the number of sheets which are interposed between each plant, the state of the weather, the dryness of the room, or the thickness of the fern leaves themselves; but, as a rule, half a dozen times are sufficient, and, if need be, the last two or three times may have an interval of two or even three days between them. If the plants make the paper bulge out, a sheet or two of stout pasteboard interposed here and there will smooth down their asperities and secure better bried specimens. In any case, a little patience and neat-handedness are necessary to secure choice specimens, and the ferns should not be taken out of press until sure that they are well dried. The best test of their being thoroughly dry is to gently bend back a little bit of the frond. If it is inflexible, then it is better to give it another turn of the drying press. If, on the contrary, it breaks, all the sap has been extracted from it by the combined pressure of the stones and the absorbing power of the paper on either side or the specimen. Then transfer them to a large book and keep them there until ready to use them. Small ferns may be pressed between the leaves of a book by tying a string around the volume to keep it tightly shut, but it is important in such case that the ferns should be dry, and the book must be opened and examined from day to day to avoid injury both to the volume and to the ferns.

As already intimated, any one with a large supply of pressed ferns has an almost limitless fund upon which to draw for household decoration. Window transparencies and fire screens are made by framing the ferns, artistically grouped, between two sheets of plate-glass. The side-lights to a hall door may be prettily ornamented in the same way, only for this purpose, in order to obstruct the view, it is well to fasten the fern on fine white net. Bright hued flowers, such as pansies, morning glories, scarlet sage, etc., add much to the beauty of such transparencies and may be successfully dried between sheets of cotton wadding placed between wooden boards.

A cluster of ferns pinned on a lace curtain where it falls apart has a very happy effect, and we have seen pretty window cornices made of a garland of ferns and autumn leaves. The maiden-hair fern looks extremely well arranged in a small basket, with a few dried bits of crimson cock's comb or bachelor's buttons. Indeed, the uses to which they may be applied are limited only by the taste and skill of the decorator.

When a fernery is contemplated the ferns should be carefully dug up and transplanted in soil as nearly as possible like that in which they originally grew.

As a rule, ferns require abundant moisture and cool shade, and the exercise of a little ingenuity will soon provide these requirements for even a varied collection. With the help of a few pieces of furnace slag or other fantastic material, a rockery can be erected in the dreariest city back yard. Sand—not sea, but river sand—should be first strewn over this, and then woods earth should be packed into every crevice where the ferns are to grow.

The newest fern cases have ventilators in the top of the glass, but it is an open question whether these are an advantage in a furnace-heated room.

A very pretty fernery may be made of an old tin tray. Paint it first with waterproof paint, then make a foundation of gravel, charcoal and cinders and some sand, not too much, however. Over this put your woods earth and plant the ferns with sheets of moss, carefully transplanted from the place where the ferns grew, covering the roots. Keep well watered, and you will have a thing of beauty all winter, constantly developing new beauties as tiny ferns and wood plants spring up from the moss.

For decorative purposes moss is scarcely second to ferns, or even flowers. In England it is much used for table decoration, and is gathered in summer and dried for winter use. It is a mistake to think that because moss is green it is of one colour, you will find it of every hue—bronze and emerald, shining, golden and dark purple green. The best way to collect it for decoration is to pull it in large tuits, which should be well shaken after reaching home and spread lightly on newspapers for a day or two, and then again thoroughly shaken, to free them from loose bits and from insects. To keep it for the winter the sprays should be dipped in water, dabbed dry on a cloth, laid flat between two sheets of brown paper and immediately ironed until quite dry. The irons should be of the heat required to smooth linen, but do not prolong the process too much or the moss will become brittle. This process answers for the coarser mosses; more delicate ones should not be ironed, and the "maiden-hair" moss should not be placed in water, or the golden extinguishers may wash off. Small, naturally mossy twigs—ivy, oak leaves, acorns, litchens—by occasionally being put out to be refreshed by rain, can be made to last for some time. The last need an occasional rain soaking, as they become brittle and powdery when too dry. The little gypsy kettles that were so fashionable some years ago may be made into pretty centre-pieces by covering sticks and kettle alike with moss, as follows: Hold one of the sticks in the left hand, take a tuft of moss sufficiently large to wrap around it in the right hand and fold the moss around and over the end of the stick; pass a long piece of fine gardening wire round it, securing the end firmly and pulling it in tight, so that the moss conceals it; wind it round once more and then take a second tuft; let the end neatly overlap the first, and secure it in the same way; continue till the stick is covered, keeping the moss as evenly and tightly rolled as possible. If too shaggy trim it with the scissors. Secure the end of the wire when finished, and if tightly done all will remain firm. The handle of the kettle should be done in the same way before doing the kettle. In covering the latter the upper edge of the tufts should be turned inside, under the tin for holding the flowers, and the first wire tied around close under the top. A very few flowers, arranged in wet sand, will answer for filling the tin. Flower pots may be covered in the same way; and flat strawberry baskets, thus concealed, and lined with white paper, make very pretty fruit dishes. A plateau of moss for holding dessert dishes is also pretty. A board of the desired size and shape is requisite; the edges may be cut out for the dishes to fit into, or they may stand on it. The moss should be made as smooth and even as possible, and may be of only one of various kinds. The common feather-moss is perhaps the best. If liked, a border of gray lichen can surround it, and outside this a second of small leaves, trailing or ground ivy. Borders of leaves and ferns can be made for dishes, and wreaths of periwinkle runners, ivy, holly bright autumn leaves. Ferns can be ironed like the moss and will preserve their colour, but the safest plan is to dry them as directed. Circles or stripes of thin cardboard can be covered with leaves and ferns for surrounding dishes, and single ferns arrangee in a pattern of the cloth. Infinite variety can be made by giving time and thought to the matter.

Porpoise-Shooting.

Porpoise-shooting affords to the Indians of the Passamaquoddy tribe their principal means of support. It is practiced at all seasons of the year, but the fish killed in the Winter are the fattest, and give the largest quantities of oil. The largest-sized porpoises measure about seven feet in length, about the girth five feet, weight 300 pounds and upward, and yield from six to seven gallons of oil. The blubber is about one and one-half inhces thick in Summer, and two inches thick in Winter, at which time the creature is in its best condition. The blubber from a large porpoise weighs about 100 pounds. The Indians try out the oil in a very primative manner, and with very rude but picturesque appliances. The blubber is stripped off, then cut into small pieces, which are placed in a huge iron pot, and melted over a fire. All along the beach were placed, at intervals, curious structures, consisting of two upright pieces of wood surmounted by a cross-piece, from which the pots were hung by chains. Under this cross-piece large stones were piled in a semi-circle, inside of which a fire was made that was allowed to burn fiercely until the stones were at a white heat. The fire was then scattered, and the pots containing the blubber were placed under the stones, and just enough fire under them to insure the melting of the blubber. When melted, the oil was skimmed off into other receptacles, then poured into tin cans of about five gallons, capacity, and the process was complete. If the oil is pure it readily brings 90 cents per gallon, but if adulterated with seal, or any other inferior oil, its value is reduced to 65 cents per gallon. A very superior oil is obtained from the jaw of the porpoise. The jaws are hung up in the sun, and the oil as it drips is caught in cans placed for that purpose. The quantity of oil thus produced is small, being only half a pint from each jaw, but a large price is paid for it by watch-makers and others requiring a very fine lubricator. The oil from the blubber gives a very good light, and was for a long time used in all light-houses on the coast. It is also a capital oil for lubricating machinery, never gets sticky, and is unaffected by cold weather. When pure there is no offensive smell, and I know of no oil equal to it for those who are compelled to use their eyes at night. The light is very soft, and when used in a German student's lamp one can work almost as comfortably as by daylight, and the dreaded glare of gas and other artificial lights is completely avoided. If industrious and favoured with ordinary success, an Indian can kill 150 or 200 porpoises a year, and they will average three gallons of oil each. But, unfortunately, the poor Indians are not so industrious, or only so by fits and starts, or as necessity compels them. Their way is usually to accumulate some 15 or 20 gallons of oil, then go off to Eastport, Me., with it for market. Thus much time is lost in loitering about the towns, and in going and returning from the hunting-grounds. Moreover, there are always two Indians to each canoe, and the proceeds of the hunt have to be divided. There is quite a demand for the oil, and, if systematically followed, porpoise-shooting would afford the Indians a comfortable support. The flesh of the porpoise when cooked is not unlike fresh pork, and at one time was much used. The Indians still use it, and it is also in request by the fishermen on the coast, who readily exchange fresh fish for "porpus" meat with the Indians.

Powerful Ocean Steamships.

[London Times.]

Twenty years ago, the largest steamers known (in this, as in all such comparisons, neglecting the Great Eastern, which was a prodigy of engineering skill), did not reach 350 feet in length, 45 feet in breadth, 3,500 tons in tonnage, or 4,000-horse power indicated. We have, at this moment, before us a list of 50 merchant steamers sailing, in the year 1860, from Southampton and other southern ports, which the largest vessels then frequented, and the list includes but 10 ships of more than 300 feet in length, none of which reached the limits of size and power just given, and the whole of which belonged to two companies, viz., the Royal Mail and the Peninsular and Oriental. At the present moment we have, afloat and at work, the White Star liners, some of them of 445 feet in length, 35 feet in breadth, and nearly 5,000 indicated horse-power; the Inman liners, comprising such ships as the City of Berlin, 488 feet by 44½ feet broad, and of about the same steam power; the Orient, of 445 feet by 45½ feet, with engines developing 5,600 horse-power; the Arizona, of about the same size, with still greater steam power and speed; and many other splendid vessels but little inferior to any of the foregoing. And these grand steamers—many of which reach the quays of New York with greater punctuality than railway trains reach the London suburbs from Victoria and Charing-cross, and would reach our quays with equal punctuality if they could avoid thd abominable sands that bar the Mersey—are the forerunners of still larger and more powerful vessels now taking shape on the banks of the Clyde and elsewhere. The Cunard steel ship, the Servia, now building, by Messrs. Thompson, of Glasgow, is 500 feet by 60 feet, with over 10,000 indicated horse-power, and will, therefore, doubtless possess a speed considerably in advance of that of the very fastest ship at present afloat in the mercantile marine. The Inman steamship City of Rome, building of iron at Barrow, will be still larger, having a length of 546 feet, a breadth of 52 feet, a gross registered tonnage of 8,000, and a steam power nearly equal to that of the Servia. The Guion line is to be increased by ships of almost equal size and power, and the Allan line is building others equal to the finest of the White Star boats. Notwithstanding the number and magnitude of the passenger steamers now running between America and this country the traffic is so great that it has only been possible to secure accommodation by arranging for passage many weeks, and even months, in advance, while the rapidly increasing population and wealth of the United States and of Canada make it certain that the interchange of agricultural produce and manufactured goods between them and ourselves will go on increasing.

Aeronautics.

The proposed attempt to reach the North Pole by balloon has given an impetus to the science of aeronautics in England. A balloon society has been formed, and, under its auspices, several air ships have been sent up in the vicinity of London. One of them contained Mr. Wright, the aeronaut; Commander Cheyne of the royal navy, who proposes to make an experiment with a balloon in his next Arctic journey; Mr. L. C. Alford of Denver, Colorado, and a newspaper correspondent In a minute and a quarter from the start they attained the altitude of 1,000 feet, in three minutes 2,000 feet, and in eight minutes 2,350 feet. The object of the travellers was not to go high, but to get over the ground as quickly as possible, and with a gentle breeze they glided along at the rate of thirty miles an hour. In the descent thay dropped 1,390 feet in a minute and a quarter. They managed to check their rapid fall before reaching *terra firma*, and landed safely after much bumping on the ground. Of the other balloons, one rose 12,000 feet. The scientific observations of the various aeronauts will be carefully compared, and a report made embodying the results obtained as to the air currents at different heights.

An English journal bewails that the world is threatened with a dearth of lions, that the "king of the forest" is gradually disappearing in his native wilds. But this grave misfortune has encouraged a Frenchman to establish a regular breeding stud of lions at Bona, where lions will be bred and brained for the market. Perhaps the royal east will, in the course of time, become so domesticated that the lion and the lamb may lie down together.

FACTS AND FANCIES.

JOHN ROUSE spied a jug under a photographer's wagon at an Illinois fair, conjectured that it held whisky, and so drank fatally of sulphuric acid.

THE municipality of Paris levies a duty on almost everything which enters the city; that of London on scarcely anything but coals, which furnish a large revenue.

TWO boys quarrelled over a game of marbles at Reading, Pa. One cried "Here's one for your head," and threw a big stone, which broke the other's skull and killed him.

THE newest creations among the peers, Messrs. Lowe and Knatchbull Hugessen, having opposed the Disturbance bill and other Ministerial measures, both these pillars of the State are indignantly discarded by their former associates.

SOME Chinamen fitted up boats and made a contract with the canning firms to fish for salmon off British Columbia. The boats drifted empty ashore on the day after, and the Chinamen were never afterwards seen. The white fishermen had murdered them.

THE "fly suffocator," an insect resembling the mosquito, is the latest affliction that has visited the Russian peasantry. Last month, in the Mirgorod district of the Poltava province, 142 head of cattle, 2 horses, 212 sheep, and 173 pigs were killed by it. The flies are said to enter the air passages of the animals and thus suffocate them.

THE following advertisement in the London *Lancet* is scarcely reassuring to the public: "College of Surgeons and Apothecaries. Hall Preliminary Examinations. The dullest and most backward get through. Payments based on results." The prospect of having the "dullest and most backward" hacking away at one is not agreeable.

THE announcement of the formation of ice during the hottest days of last summer in the caves near Zchinval, in the Caucasus, attracted many travellers. It is reported that these caves are filled with ice only during the hottest weather, and that the newly formed ice disappears with the fall of the thermometer. This curious phenomenon greatly puzzles the Caucasians.

"I BEG your pardon, sir," said one of the three men who entered Dovey's store at Mercer's Station, Ky., "but will you please hand me the five hundred dollars out of your safe?" and he politely levelled a revolver. "Sorry to disoblige," Dovey replied, "but there isn't a cent there;" and he affably opened the safe for them to see. The robbers made a thorough search, and withdrew.

THE Russian political inquisition, known under the name of "The Third Section of his Majesty's Own Chancellery," had acquired such odium that the Czar, on recently abolishing it, would not permit the Fourth Section to be styled the third one. By special ukase he ordered that the Fourth Section should henceforth be known simply as "His Majesty's Own Chancellery for the Institutions of the Empress Mary."

THE *Antiquary* says that the largest oak in England is that in the parish of Cowthorpe, west riding of Yorkshire. It is hollow, and some forty men could stand within its trunk. It is believed to be about 1,500 years old. The Cowthorpe oak, which stands on the land of Andrew Montague, a great proprietor, is larger than the Greendale oak at Welbeck. A few years ago the boughs extended sixty feet from the trunk.

A PAIR of lovers at San Francisco could not induce the County Clerk to give them a marriage license, because their ages were only 16 and 15, and their parents objected, being Jewish on one side and Roman Catholic on the other. Therefore the boy and girl gathered a party of their friends as witnesses, joined their own hands, and formally declared themselves husband and wife. The question whether the ceremony was valid is to be tested in court.

BEN ZERCHER was an only son, and his father owned one of the best farms in Belmont County, West Virginia. The old man was past 80. During several years his health had declined, and it was supposed that he would speedily die. Ben was so confident of this that he began to buy stock for the farm, and made other preparations to take possession of the property. But the octogenarian suddenly recovered from his illness, and took to courting a neighbour's daughter. This exasperated the impatient heir, and he shot his father dead, recently.

A STRANGE pagan scene was witnessed in the Volkovo Kladbishche, the largest orthodox cemetery of St. Petersburg. From early morning it was crowded by thousands of men, women, and children. After a solemn requiem by the Metropolitan and clergy, the relatives and friends of the dead treated each other to kutia, or rice boiled with raisins, and drank *in memoriam* vodka, or rye whisky. In half an hour there could be heard not only loud weeping, but singing, swearing, and boisterous laughter.

THE *Saturday Review* says that the number of autumn sojourners in London is increasing every year, and the people who used to live in their back rooms now make no secret of their whereabouts; while as for the male habitues, they may now be found in scores not only among Guardsmen, Government functionaries, or business men, but among those who have no particular tie that binds them to one place more than another, but who are getting sagacious enough to see that they have, on the whole, a better chance of enjoying themselves by maintaining their headquarters in London than by restless flittings to and fro.

A GENTLEMAN in London lately took a bad half sovereign. He asked sundry experts if it might possibly be good, but they were unanimous that it was not; and so he put it away in the corner of his pocket and resigned himself to the loss. But it happened that in the evening he took a cab and drove about to so many places that, feeling for change, he discovered that he had not enough to pay the fare. Forgetting all about the half sovereign being bad, he handed it to the cabman, asked for change, which the man gave him, and then drove off hurriedly. Just then the fare remembered, and, not wishing to "do," the cabby, called out:—"Here! that money is bad!" "It's quite good enough for you!" retorted the man, turning round with a grin. The fare looked at the half crowns, and at once suspected that they were bad, as proved to be the case; but the long drive had been enjoyable, and on the whole the cabby hardly got the best of it.

Buried for Years in a Cavern.

A few days ago Mrssrs. D. E. Doane, W. H. Enfield, and W. W. Blake were surveying and locating the boundaries of the Chihnahuo mine in the Magdalena mountains, about twenty-five miles west of Socorro, where they made a somewhat startling discovery. In chaining down the hill from the centre stake to the west-side line they passed nearly over an opening in the rocks that was about three feet long and fourteen inches wide. A small dead tree about fifteen feet in length was let down into the aperture, and immediately disappeared from view. A young pine tree thirty feet long was then chopped down and a ladder hastily improvised therefrom. Carefully let down, it finally found secure foothold, and two of the party descended into the cavern. By the aid of some lighted pine knots they discovered that they were in the centre of a room about thirty feet square. Continuing their explorations, they found natural tunnels leading to two other but smaller chambers. The ceiling of the main room was fully twelve feet from the floor, In one corner of this room were found the bones of a human being. A portion of the rock overhead had fallen in and buried the greater number of the bones, but one of the collar blades and a bone from the forearm were obtained in excellent state of preservation. Pen can not portray the agony which the solitary occupant of this "dead man's cave" must have endured during his last hours. He could scarcely have been a lone prospector lured to his doom years ago by a fatal curiosity, as no sane man would undertake to explore the cave without first sounding its depths. Besides this, the pioneer of the Magdalens, Mr. J. S. Hutchinson, says that, to his knowledge, no prospector has been missed during the last fourteen years. It is thought that the Apaches, having knowledge of this subterranean prison, must have compelled some unfortunate captive to descend into the eave and tauntingly left him to his fate. How well might the inscription over the entrance to the infernal regions, as recorded in Dante's "Inferno,"

Who enters here leaves hope behind,

be applied to this dismal dungeon. The last chapter of the life of the tenant of this cell would make abundant material for a romance of the border.

ALFONSO makes the Palace hideous by singing "Baby Mine."

THE Czar has become so nervous that a sound of a wash boiler falling down stairs at midnight, will raise him out of bed before it strikes the third stair.

EMINENT PEOPLE.

DR. TANNER lectured at Lawrence, Mass., and took in only $2.75. With his peculiar ideas of gastronomy he ought to live sumptuously on that.

THE Queen of Sweden, who is very ill, has gone to Antwerp to place herself, as her last chance of recovery, in the hands of a celebrated physician.

QUEEN VICTORIA is a poor speaker. She wouldn't draw worth a cent as a lecturer. Her last speech had the effect of dispersing Parliament, to which it was addressed.

THE cruise of Mr. Gladstone, his family and friends, in the Grantully Castle, cost a very large sum of money, the whole of which was defrayed by Mr. Donald Currie, an English merchant, and his partner.

WHEN that baby Princess of Spain grows up and finds how mad everybody was about it, she won't feel greatly flattered. The nearest she can come to it is to wear a Derby hat and bang her hair.

MR. RUPERT KETTLE is about to have greatness unexpectedly thrown upon him, Mr. Gladstone having advised the Queen to grant him knighthood for his tact and energy in preventing many strikes, and his plan of arbitration boards, which have worked so well in the north of England.

MR. FAWCETT, the British Postmaster-General, has a new plan for facilitating the savings of the poor. A saving child may now get an official strip of paper intended to hold twelve stamps, add a stamp at a time to it as he can save a penny, and, when it is full, take it to the postoffice and get a savings bank receipt for a shilling, the minimum deposit which it will pay the Postoffice Savings Bank to take

RECENTLY an American traveller saw on a hotel register the name of "Sir A. T. Galt, and fifteen children." The latter were ushered into the dining-room by their governess, and were mostly fine-looking, well-behaved girls. Britons allude to Americans, in a cynical way, as the people who particularly overdo things. But when it comes to fifteen young *Canadian* girls, it seems to us that it is rather "crowding the mourners."

ABEDDIN PASHA, Minister of Foreign Affairs, presented himself the other day before the Sultan in such a very seedy coat that his Majesty could not refrain from suggesting to him that it was only decent he should put on his best clothes when he was going to see his sovereign. Abeddin replied humbly that he had put on his very best. Whereupon the Sultan directed one of his secretaries to give an order on the Imperial tailor to rig the Pasha out completely. Abeddin accordingly ordered thirty-five coats, thirty-five waistcoats and the same number of every other garment. Since then the mean attire of the functionaries who have been called to the palace has been quite striking, but none of these imitators have as yet excited the Sultan's commiseration.

AN Englishman who knows the Baroness Burdett Coutts well says her vitality and energy are extraordinary. When she is perfectly well she defeats her age by a dozen years. She is a good horsewoman, and is still fond of exercise, and she walks with an elasticity which many a younger woman might envy. Her capacity for business has long been known; and though her benevolence is boundless, no begging impostor could ever hope to outwit her. She has all the shrewdness of the Charity Organization Society, without the callous cynicism which makes that body nothing more than a system of police. Her knowledge of politics and politicians extends over half a century; and as she can write as well as speak with no little grace and force, a book of her recollections should have greater interest than anything of the kind which has been published for many years.

A LATE number of the London *Truth* contains a statement in reference to William H. Vanderbilt and Meissonier, which is quite characteristic of the prompt, decisive way in which the former acts. While painting Mr. Vanderbilt, Meissonier observed: "There is one picture that I really loved, and unhappily it is in Germany. It represented General Dessaix in the middle of a plain, questioning some peasants. It was fine; it was very fine. Petit sold it to a German, a Dresden man, long before the war, for 30,000 francs. I have done everything to get that picture back to France, to ransom it from its captivity in Germany. Petit offered the owner as much as 100,000 francs for it, but he would not sell. I never think of it without a real pang." "Ah!" said Mr. Vanderbilt, beginning to talk of something else. A few days afterward Meissonier went to dine with Vanderbilt. Upon entering the salon there was his Dresden picture facing him upon an easel. "I bought it by telegraph for 150,000 francs," quietly remarked Vanderbilt. "It was a simple enough matter, you perceive, to get the picture."

MR. EDISON is among the prophets once more. He has now perfected the Japanese bamboo for the carbon loop, and in four weeks will have his shops and eight miles of street lamps lighted. He has facilities for making 1,000 lamps a day, and a man engaged in canvassing the lower part of New York City for customers. From the figures of the amount of gas and steam power used he calculates to introduce his light at such prices as will send the gas companies into the milk or grocery business. The wires will be laid down in December, "The gas companies," he says, "are fighting hard to keep the city authorities from giving us permission to lay wires, but they are butting against a wall. Their days are numbered." The lights which went out last winter burned a little while and then were only used for experimental purposes. Some of them lasted 900 hours; but others only a few days. They were abandoned and the bamboo fibre substituted. "The chorus of abuse and ridicule which greeted me in January last," he says, "induced me to work without noise." The details are now perfected, and he seems almost as positive of his success as he was eight or ten months ago.

Wonderful Swimming of a Scotch Girl.

The young lady who has shown this wonderful endurance in water is a Miss Lizzie Gow, who swam from Dunoon to the Sloch Lighthouse, and was in the water one hour and fifty-three minutes. She is only 16 years of age, and when it was known that she intended to swim the channel, a gentleman also essayed to accomplish the feat. He swam vigorously for about a mile, when he was forced to take refuge in a boat, completely benumbed. Before mid-channel was reached Miss Gow's hands were benumbed, and she turned on her back and chafed them a few moments. Refreshed by the rest, she again proceded on her way. At this point she was joined by her brother from one of the boats following her, who is a splendid swimmer and diver, but he also had to succumb, after being half an hour in the water, Left alone, she followed the leading boats with indomitable pluck, and gradually neared the shore. The current was now, unfortunately, very strong against her, and her failing strength was unable to fight against the tide, and she made little or no progress. When within fifty yards of the shore she complained of cramp, and her friends advised her to leave the water. She complied, reluctantly, and, after entering the boat, was carefully attended to. After partaking of refreshments and resting an hour she returned to Dunoon, none the worse for her daring swim.

A Bloody Room-Mate.

It was at the time of a county fair, and the village was crowded.

A man, carrying two round bundles carefully tied up, knocks at the door of an inn and asks for a room. They tell him that the best they can give him is a room with two beds, one of which is already occupied. Under the circumstances he is obliged to accept the vacant bed. The occupant of the other is fast asleep and snoring loudly when he enters the chamber. But he takes him by the shoulder, wakes him up rudely, and asks:

"Are there any rats or mice here?"

"I believe not, sir."

"All the better, for they gnaw everything they can find. Now, I have there," added the newcomer, pointing to the round bundles, "the heads of two persons whom I executed this morning, that I am taking to Paris, and you understand if there were any rats or mice——"

"Heads of persons!" exclaimed the other, turning pale.

Five minutes after, the possessor of these horrible trophies was alone in the chamber, where he slept comfortably until morning.

The bundles were merely two melons.

IT is said that profanity has increased fifty per cent. in this country since the telephone came into general use. The boy in the central office is all to blame.

The Wheat Crop of 1880.

Where It is Grown—Its Extent—Its Amount.

What Shall We do With It?—How Much Will it Bring?

(From the Milwaukee U. S. Miller.)

Within the memory of men now in active business the wheat crop of the United States was no element in the food supply of the world, outside its own borders.

Thirty years ago, American grain or provisions was not a known quantity of Europe, as there were no surplus for export. At that time, Europe, however hungry she might be, fed herself, or starved. The demand from England, which, owing to her small area of land, as compared with her population, has been for a century the great food-consuming country of the world, drew her supplies from the wheat fields of Russia, through the Baltic ports, and from the Mediterranean ports of North Africa.

Each geographical division of the globe: Europe, Asia, Africa, and America fed themselves, or starved. The great wheat fields of to-day were unknown and unexistent.

Now, through the medium of steam transportation, and the settling up of newer regions, the source of supply has been changed and most marvellously increased, while the point of consumption remains nearly the same.

England is still the point to which the surplus food of the world flows for a final market. Europe is the only division of the habitable globe that does not produce enough to eat. Russia, until the past fifteen years, furnished the surplus of wheat required to supply any European deficit. Since then marked changes have occurred in the sources of supply, and America, to-day, is furnishing so much of the wheat as to have become prime factor in the trade, furnishing, during the past year, 175,000,000 to 180,000,000 bushels in wheat and flour, of a deficit of 250,000,000 bushels. The balance of the deficit was not furnished, as formerly, by Russia entirely, but from sources even newer than America: India and Australia.

Russia is now the only European country that is counted on for any surplus, and as it is reported that, on failing crops, she can no longer be depended on for any definite supply, it is as well in all calculations to ignore her as a source of supply, although for years to come she will probably furnish a large but quite variable and indefinite quantity of the deficit.

The countries now looked upon as the wheat purveyors of Europe are North America (the United States and Canadas), India and Australia, of which America is of paramount importance, as she is able to supply any probable deficit alone.

In the United States only a small section comprises a wheat belt now under cultivation that produces an excess of the requirements of the population. Only nine States, according to the returns of last year, produced an excess for export, viz.: Minnesota, Iowa, Kansas, Missouri, Michigan, Wisconsin and Nebraska, on the Atlantic slope, and California and Oregon on the Pacific. The adjoining Territories are, however, being rapidly developed, and will this year go to swell largely the increased productions of the States above named.

It will be noticed that the wheat territory is confined to the section north of the Ohio, and west of the Mississippi river, and to the great Pacific slope. The great unsurveyed, and as yet unsettled, areas, in the tract thus imperfectly described, adapted to the raising of wheat, is practically illimitable. Not one-tenth of the land is yet occupied, and if it were all under cultivation, as are the older parts of Minnesota, would produce in one year sufficient to supply twice the quantity the whole world requires. The world's present consumption of wheat is estimated at 2,000,000,000 bu. The present production of the American wheat belt is about 500,000,000 bu. With the undeveloped lands constantly being utilized, the increase in wheat production is likely to far outstrip that in other portions of the globe, and only the interposition of obstacles to the free movement of the wheat to points of consumption can thwart the apparent destiny of this country as the granary of the world for years, if not centuries, to come.

To that lying within the boundaries of the United States is to be added a vast area in the Dominion of Canada, stretching along the lakes, through the Red River country, and ending in a vast unsettled region, believed to be admirably adapted to the raising of small grains.

The wheat crop of the United States is designated by two generic terms—"spring" and "winter." The spring wheat is grown on the lands north of the parallel of 40 degrees, and mostly in the States and Territories north and west of the foot of Lake Michigan. The spring wheat section comprises the States of Wisconsin, Minnesota, Iowa, and the adjoining Territories.

The winter wheat States comprise, on the eastern slope, Michigan, Illinois, Missouri, Kansas, Nebraska, and all the States south of the Ohio river, as well as the entire Pacific slope, comprising California and Oregon.

The production, owing to the immense increase in California, Oregon, Missouri, and the States along the Ohio valley, has for the past year made winter wheat the prime factor in the trade. It is harvested earlier than spring wheat, and goes into the channels of trade before the spring wheat is garnered.

The rapid opening up and settlement on the Dakota and other northwestern lands, is again increasing the supply of spring wheat, and may ultimately give it the preponderance, as to quantity, which it formerly held.

The Crop of 1880.

The reports throughout the harvest season were, as usual, conflicting, but at the close of this week the wheat of the whole country is garnered, and the reports are nearly unanimous that the crop is bounteous and the quality excellent,

Winter Wheat.

The harvest commenced earlier than usual in the Southern States, and was unexceptionally good both as to quality and quantity, —so good as to force an unusual amount into market during the past month. Michigan reports a crop of 34,000,000 bus. of white winter wheat against 31,000,000 bus. last year. Illinois and Indiana show a much larger acreage and a better yield. On the Pacific coast the increase both in acreage and yield is large. The San Francisco *Journal of Commerce* estimates the crop at 56,000,000 bushels, which is in excess of the crop of last year 20,000,000 bushels, or nearly 40 per cent. Oregon reports a gain of 30 per cent, both in acreage and quantity. It is believed that there is a surplus from export from California and Oregon of not less than 45,000,000 bushels, the San Francisco *Journal of Commerce* estimating the surplus of the State of California alone at 25,650,000 centals—42,750,000 bushels.

Spring Wheat.

The spring wheat sections have doubtless produced an amount of wheat largely in excess of the bounteous harvest of last year.

In Wisconsin, floods on the rivers and unpropitious weather have, in some parts of the State, nearly destroyed the crop, but the damages have not been in the best wheat-growing sections, and the crop of the whole State it is believed will aggregate as large as last year, although owing to the fact that the southeastern portion of the State has turned largely to winter wheat, the supply of spring wheat may show a slight decrease.

In Minnesota, which leads all others in the production of spring wheat, the crop is all harvested, is of excellent quality, and simply enormous in quantity,—the lowest estimate being 10,000,000 bus. in excess of last year, and the aggregate quantity being estimated at from 38,000,000 to 45,000,000 bus; 40,000,000 bus. is certainly not an extravagant estimate of the yield of that State this year.

Iowa gives only a moderate report, although the acreage has been considerably increased. If she furnishes as many bushels as last year, it will be better than we expect.

Beyond these States away out as far as railroads go, there is nothing but unieterrupted reports of great harvests of spring wheat, waiting purchasers and transpartation, The area of wheat acreage along the line of the Northern Pacific Railroad is estimated at 10,000,000 acres against a known acreage of 6,000,000 acres last year. At the very moderate estimate of 10 bushels to the acre, this would give 100,000,000 bushels of wheat in that region, one-half of which has never entered into any statistical statement before.

Thus having in a general way reviewed the situation we come, in the absence of figures, which will be accessible to nobody till the wheat is sold and passes into the cnannels of trade, to the attempt to estimate the volume of the enormous crop that is now gathered.

The Amount in Bushels.

The crop of last year, according to the reports based on what has already gone into channels of trade, was 450,000,000 bushels. There is certainly no State in the Union that records a less yield than last year. Taere is to be added to the product of last year the acknowledged increase in Minnesota of 10,000,000 bushels, in California of 20'000,000 bushels, in Dakota of, say 1,000,000 bushels, in Michigan of 3,000,000 bushels, and that of all the outlying territory along lhe lines of Western railways which cannot yet be ascertained, except in a general way not reducible to figures.

Assuming the crop of 1879 to be correctly stated at 450,000,000 bushels, there can be no reasonable doubt that that of the present year will exceed 480,000,000 bushels, and is quite likely to reach 500,000,000 bushels. The increased acreage reported by the Agricultural Bureau as sown this year, corroborates our estimate if the yield does not fall below the average for the past len years.

The question now paramount is, *What shall we do with it?* We may, although no country ever did, use for seed and home consumption 5.5 bushels per capita, which for 50,000,060 of pppulation would dispose of 275,000,000 bushels. This leaves, estimating the crop at 480,000,000 bushels, 205,000,000 bushels surplus. Add to this the visible supply reported last week, of 13,000,000 bushels, and it shows a surplus of 218,000,000 bushels.

Last year, under a most extraordinary demand from Europe, we exported 180,000,000. This is hardly likely to occur during this yeur. The general harvests in Europe are, instead of being unexceptionally poor, ss last year, fairly good, and consequently no demand above ordinary years can be reasonably expected.

The followiug table shows the exports of wheat and flour, and the prlce of wheat for the past ten years, also the acreage, yield and products in the United States:

Years.	Acreage.	Yield per Acre.	Total Product Bus.	Price per Bushel.	Total Value of Product.	Wheat & Flour Exported. Bus.
1870.....	18,092,591	12.4	235,884,700	$1.04 .2	$245,865,045	52,574,111
1871.....	19,943,803	11.5	230,722,400	1.25 .3	290,411,820	38,995,755
1872.....	20,858,359	11.9	249,007,100	1.24	310,180,375	62,014,715
1873.....	22,171,676	12.7	281,254,700	1.15	323,594,806	91,510,398
1874.....	24,997,027	12.3	310,102,700	0.94 .1	291,107,895	72,912,817
1875.....	26,381,512	11.0	292,136,000	1.00	294,580,990	74,750,682
1876.....	27,027,021	10.4	280,356,500	1.08 .7	300,259,300	57,149,946
1877.....	26,277,546	13.9	364,194,146	1.08 .2	394,695,770	92,141,626
1878.....	32,108,560	13.1	420,122,400	0.77 .7	326,346,424	150,502,506
1879.....	32,545,899	13.1	448,755,118	1.11	499,008,803	180,000,000

From the above table it will be seen that the average export demand for Europe, adding the extraordinary demand for the past two years, is less than 86,000,000 bushels per annum. It is therefore hardly to be expected that the apparent surplus will find an ultimate market at present prices.

The crop will start from the granaries of the farmers, and after going through the eddies of speculation, and resting in the ponds of local trade, find its level at much lower prices than have ever before been known in this country.

There are, however, counteracting influences which it may be well to consider.

The sparse supply of the European countries for the past two years has entirely depleted the ordinary reserve. With a revival of business, and a reinforcement of their purchasing power, which has been so weak for the past two years, they would not only buy what was demanded for immediate consumption, but refill their exhausted granaries. So, at fair prices, the immense surplus of the American wheat crop of 1880 may be disposed of.

It will, however, find its path to a legitimate market through devious ways. Speculation will stand in its way, although ultimately it will force its own channel.

As to the price of the article, that is "a thing no man will find out"—that it ought to be lower than ever before, under the law of supply and demand is certain. Excepting corn, there is no product of the earth in such superabundance as wheat, and, relative to other necessities of life, it must take a much lower range in price than now obtains before it can be consumed.

MINES AND MINERALS.

OUR MINERAL RESOURCES.

In the next issue of the Lumberman, we propose to follow up the important subject of the mineral resources of Canada, and will refer at some length, to a sketch by Mr. Garret, a well-known Geologist at Ottawa, of the economic minerals, which are to be found in the Ottawa Valley.

Phosphate Mining in Quebec.

Montreal, Oct. 2.—There is a good deal of misstatement going abroad in regard to the transaction between Messrs. Dion Bros., phosphate manufacturers, of Granville, France, and the Local Government. It is asserted in a local journal this evening, that the firm in question has obtained a large amount of phosphate land in this province from the Government. Your correspondent was informed by the Premier this evening that there has not been granted a single acre of the public lands, and what is more, it is not contemplated to grant any. Some time since the head of the firm, who is here, made an offer to the Government to establish extensive works for the manufacture of sulphuric acid, which is used in the reduction of phosphates, to be used as a fertilizer. They stated that seaweed, which was one of the substances necessary, could be easily procured at the Saguenay, and other places in Canada. The Dion firm is largely engaged in the same business in France, and the Government, looking upon the proposal as one of infinite importance to this province, agreed, if Messrs. Dion would carry their proposal into effect within one year, to grant them a bonus of $4,000 per annum for ten years, on condition of their supplying to the order of the Government up to 2,000 tons per annum for the same period, at $26 per ton. This is considered a cheap price, as the same kind of fertilizer imported here costs at present $40 per ton. Mr. Dion agreed to the Government terms, whereupon an order-in-Council was passed granting the bonus, and here the matter rests. No agreement or anything else has been signed, but there is no doubt so advantageous an enterprise as the one in question will be entered upon without delay. It is the Messrs. Dion's intention to purchase mines immediately, and they expect to convert about 50,000 tons annually into manure. Nothing definite yet has been determined upon as to the sight of the factory, further than that Montreal is considered the most central point for it. The outlay of money which this enterprise will cost the Messrs Dion will be enormous, but they expect to meet with a large return. The advantage of the arrangement which the Government has made for the province can be estimated, when it is stated that Mr. Joly offered Mr. Goldring if he would erect such a factory, $10,000 per annum. The quantity of phosphates to which the Government will be entitled will be distributed to the farmers through the local agricultural societies.

Phosphate mining in Ottawa county is quite brisk. Mr. William McIntosh, agent for the Pickford Fertilizing Company of London, England, is working the High Rock Mine formerly owned by Richie & Co. The mine has been worked for the last two months, and some 900 tons of phosphate have been taken out, and twelve men are constantly employed. Mr. J. McFarlane & Bros. are working the Preston property. They have taken out about 600 tons this season. Messrs Humphrey and Adams at the Gore of Templeton, have extracted about 600 tons with a small force of men.

A man being tormented by corns, kicked his foot through a window, and the pane was instantly gone.

"THE SULTAN'S EVIL GENIUS."

THE MAN WHO SWAYED THE DESTINIES OF AN EMPIRE—A THOROUGHLY UNSCRUPULOUS FELLOW—MORE THAN A MATCH FOR THE DIPLOMATS OF EUROPE.

The London correspondent of the New York *Sun* is personally acquainted with Said Pasha, the new Prime Minister of Turkey, or rather the *old* minister restored to power. He has nothing good to say of him. Here is the way in which he describes Said's rise to power. "In the early part of last year he was Minister of Justice, and the official world of Constantinople was even then surprised and disgusted at his sudden rise to a position of so much influence. At the commencement of the Russo-Turkish war he had never been heard of. He was then an obscure clerk in a public office, and was brought to the notice of a very powerful personage in those days, Mahmoud Damad Pasha, the Sultan's brother-in-law, and the evil genius of Turkey; for it was owing to the unscrupulous ambition, the jealousy of all rivals, and the overwhelming influence which this thoroughly dishonest man exercised over the mind of his Majesty, that the latter refused to listen to the counsels of wise and patriotic advisers, distrusted all officers, naval or military, in his employ, and confided the fate of his army to such unmitigated scoundrels as Suleiman Pasha, Eyoub Pasha, and others. Such a man, universally mistrusted and detested by all the better sort of Turks, needed some instrument as thoroughly unscrupulous as himself, and willing to do the dirty work which formed the staple of his political occupation. Such an instrument he found in Said Pasha, and as the use the latter could be turned to was agumented just in the degree in which he was advanced in influence and position, the Sultan was induced, by the advice of his brother-in-law, to promote him with great rapidity." After the treaty of San Stefano the Sultan, in a violent reaction of rage, sent Mahmoud Damad into exile, from which he has never been allowed to return. Said saw the storm coming, prudently turned traitor, denounced his former patron, and was finally made Cabinet Minister. Here are first impressions. "As a rule a Turkish Cabinet Minister is cold, haughty, dignified and reserved, but Said Pasha was exactly the reverse of all this. Instead of a burly man, sitting on a divan, with one leg tucked under him, imperturbably smoking a cigarette, after the manner of a conventional Ottoman functionary, I saw a Parisian looking little creature trot into the room—a creature with a restless, furtive eye, and a quick, uneasy manner, in which extreme cunning seemed blended in equal proportions with abject servility. Had I been the representative of a great power, he could not have been more overwhelmingly civil, or more profoundly distrustful of my intentions. But I no sooner entered into conversation with him than I was struck with the extraordinary intelligence which his ferret-like features displayed. He is a very minute man, with a stoop, and a remarkably soft, gentle voice. He manages after a time to make you forget your first mistrust, and reproach yourself for having done him an injustice. It is only after the wearisome experience of months that you discover he has been from that first interview you bitterest enemy; that the salient points which he took care to dwell upon in your conversation as more particularly meritorious are precisely those which he has specially denounced, and that his only object in keeping you on the most friendly and confidential terms has been to find out new ways of betraying your confidence. When he discovers that you have found him out he becomes invisible; and, as by this time most people have found him out, he sees scarcely any one. When he first became Prime Minister in October, last year, his oily and engaging manner, and his earnest professions of good faith, deluded most of the diplomatic representatives at Constantinople, but one by one they remarked his treachery, and finally, on the arrival of Mr. Goschen, and at the instance of the latter—for he had been forewarned what manner of man Said was—the Sultan dismissed him."

But Said was too clever to be got rid of in this way. He was friends with all the eunuchs, pipe bearers, mollahs, and other riff raff of the palace, and through their influence managed to retain nearly all his old authority. The Sultan, tired of keeping up appearances, at length dismissed Kadei, and restored Said. This was a direct snub to the English Government at the very moment when their naval demonstration had reached its culminating point. The views of this correspondent on the future prospects of affairs in the East are worthy of attention.

"What Said will do now that he is again responsible in the eyes of Europe, remains to be seen. What particular bait he will dangle before the powers, what apple of discord he will throw among them, what new and unexpected device he will hit upon to ward off the impending catastrophe, it is impossible to conjecture. He has proved himself more than a match for such distinguished and tried statesmen as Khaireddin Pasha and Mahmoud Nedim Pasha, both of them ex-Grand Viziers, with far more real statesmanship than this pliable adventurer. It is possible he may still pilot Turkey through the storm; but on the face of it his reappointment augurs badly for the success of Mr. Gladstone's policy, for there cannot be a question that Said Pasha is the personification of that passive resistance and that determined hostility to the foreigner which are especially acceptable to the Sultan. He is opposed to all internal reform, for he depends for support on those who fatten by abuses, and, being utterly destitute of anything like a sentiment of patriotism, he would unhesitatingly wreck the ship of State if he thought that the advice that would save it, might be unpalatable to the Sultan, and therefore wreck Said Pasha.

This has always been the trouble. No one dares to tell the Sultan the facts. Honest men who endeavour to open his eyes to the dangers by which he is surrounded, and give him advice which is unpalatable, because it implies concession to the foreigners and the introduction of reforms by which his own power would be limited, he distrusts, and finally gets rid of; and there are always to be found plenty of self-seekers who see that the royal road to favour is by confirming him in all his prejudices, exciting his suspicions against the men they fear because they are honest, while they encourage him in his belief that the only true policy is one of determined obstinacy and defiance in so far as the European powers are concerned.

Hence it is that the calculations of those powers are always wrong. Knowing the true state of the case, they suppose that the Sultan knows it too, and they cannot understand an infatuation which impels him to his own destruction. This has been the secret of his passive obstructiveness. The explanation of the recall of Said Pasha to power is that the Sultan wishes to be strengthened in his attitude of resistance, and to believe that the danger is not so great as it is represented to be. Said is quite ready, for his own purposes, to confirm his Majesty in this view, and to give him the advice which he thinks will be most agreeable to him, perfectly regardless whether it is the best under the circumstances.

The Raising of the Tay Bridge Girders.

The work of raising the *debris* of the Tay Bridge from the bed of the river is now completed. About 6000 tons of iron have been recovered and beached at Broughty Ferry and Tayport, at a cost, it is reported, of about £10,000 or £12,000. A considerable proportion of this expenditure will be met by the amount derived from the sale of the iron. In each of the twelve fallen piers there were forty-two pillars, making a total of 504, and the actual number recovered is 510, the half-dozen extra columns being those which fell along with the two girders which were blown down during the construction of the bridge. Portions of those two girders, to the weight of about 150 tons, which had been left in the bed of the river, have also been raised. The work of lifting the material was begun at the end of February, and has been continued until the present time. During the spring, however, the work was greatly retarded by reason of the weather, and the actual working time has been only about four months. Mr. Armit, who superintended the work on behalf of Mr. Waddell, the contractor, deserves praise for the vigour with which he has pushed on the operations; and the fact that the work, which was necessarily of a very hazardous character, has been successfully accomplished without accident, is due in great measure to the care which he exercised for the safety of the men under his charge.

Messrs. McAllister & McLean have sold their Pettawawa limits to James McLean & Co. The figure received, we believe, was something over $130,000, a very handsome and no doubt satisfactory one to the sellers, who purchased the same limits something over a year ago for only 40,000. This sale demonstrates better than anything we have yet heard how the lumber trade is "booming."—*Pembroke Observer.*

Gored by an Angry Bull.

FARMER JOHN MURRAY'S BATTLE FOR LIFE IN HIS STABLE—THE GROANS THAT CALLED MRS. MURRAY TO THE RESCUE OF HER HUSBAND.

John Murray is a farmer living in Walker avenue, near Grand Avenue, Greenville, N. J. His two story-house stands in the avenue, and behind it he pastures his cattle. The animals are housed at night in small sheds, one story in height, in the rear of his house. In his herd is a young short-horn bull. The bull is a wiry animal, but has heretofore never shown an ugly disposition. On Wednesday evening Mr. Murray went out of the house, saying to his wife that he had forgotten to give the animals a drink of water all round. He would do it before he went to bed. He had not been gone long before Mrs. Murray heard groans from the direction of the barn. She ran out of doors and called her husband's name. There was no reply, except another groan, that unmistakably came from the barn. Mrs. Murray hastened to the barn, and as she approached the bull bounded out of the stable and ran into the open lot. She found Mr. Murray lying on the stable floor, with his left hand upon a wound in his left side. He had been pierced by the horns of the bull so that part of his intestines protruded. Mrs. Murray called for help, and her sons came and aided her to carry Mr. Murray to the house. Dr. Wilkeson of Bergen avenue was summoned, and the wound was sewed up. He says that three days at least must elapse before he can announce positively whether Mr. Murray is out of danger.

Mr. Murray was seen yesterday by a reporter for the Sun. His bed was surrounded by sympathizing neighbours. He is in the prime of life, and if an active life and a hardy constitution can avail he seems pretty sure to recover. He willingly related the story of the struggle he had with the bull. He said: "The bull is a young fellow and a smart one, too, but I never knew him to be ugly before. He seemed to be as gentle as a cow. It was my custom to tie him by a rope; one end of the rope was around his horns and the other end was fastened to the manger. When I went into the stable I untied the rope; and led him out peaceably enough. When I attempted to lead him back he hung back and yanked at the rope viciously. I pulled at the rope and threatened and coaxed the bull by turns, and at last got him inside of the stable. When I had got him inside of the stable I was sure that he was in my power, and as he gave a lunge for the door I twitched the rope around his horns as sharply as I could. This seemed to make him mad. He made a dive at me and I jumped to one side. Then I saw that I had my hands full. By this time I was pretty mad myself. So I gave the rope another yank and yelled to the bull to behave himself. I thought that I could frighten him. But the next thing I knew he had pinned me to the side of the stable with his horns. I couldn't catch my breath. His horns were small and sharp, and he jabbed at me viciously. I couldn't get hold of his horns, and there was no weapon within reach. My back was against the stable and his horns were against my abdomen. When he knew that he had me he just lifted his head up and pushed, and I could feel the flesh tear. Then the bull relaxed his hold and I dropped. Again he came for me and begun to gore and toss me. I made a great outcry and he darted out of the door. Then my wife came to my aid.

Whipping for Certain Kinds of Criminals.

(From the Journal of Commerce.)

On the 15th ult. one of the most brazen-faced ruffians who ever stood up in a British court suddenly wilted and uttered a scream on hearing the terms of the Judge's sentence, and was taken away in a fainting condition. He had no defence. The evidence against him was conclusive. He was sure of conviction and of a severe sentence, and he knew it. But he was not prepared for one part of the punishment prescribed by Mr. Justice Stephens. He screamed and almost fainted, not in view of the twenty years of penal servitude, but because the Judge ordered, as a fitting prelude, thirty lashes from a cat-o'-nine tails. This man had robbed and attempted to murder by drugging, and then throwing from a railway carriage, a travelling companion, in whose confidence he had artfully ingratiated himself. It would have ended in murder but for the inability of the assassin to eject his victim from the car before the train stopped. The ruffian then escaped with his booty, but was followed by the half-stupefied, badly injured man, who staggered on the platform and gave an alarm which led to the capture of his assailant. This strange affair took place in a car (of the London underground line), of which the two men were the only occupants. Mr. Justice Stephen, in passing sentence, said it was "the most cowardly and brutal outrage that had ever been brought under his notice." He marked his sense of horror, as well as made the sentence a wholesome caution to all other like-minded desperadoes, by prefixing the thirty lashes to the twenty years' imprisonment. The prisoner would not have flinched from the incarceration, but he winced terribly under the judgment of the cat, as if he already felt her nine tails raising wales on his bare back.

It is the uniform experience of British Judges that corporal punishment is the most certain known deterrent of cowardly and brutal offences. When any peculiarly shocking crimes against the person begin to become common in England, the Judges always check it by ordering a doze of the cat, well laid on, in addition to a long term of imprisonment with hard labour. This is the best known preventive of outrages on women and children. It is the only thing that has put a stop to garrotting. Its success is so marked in the declining frequency of cruel and malicious assaults upon the person in England that the British public almost unanimously approve of it. Only a little minority of those philanthropists whose sympathies for criminals rise in exact proportion to the diabolism of their proteges, continue to protest against the lash as a remedial agent of society. While that agent does so manifestly good a work in England, it will be judiciously conserved there. The theoretical opposition to it in the United States is widespread and intense, as any man finds out to his cost who proposes to reintroduce it in our judicial system. But now and then thinking Americans will brave the consequences, and ask themselves and their neighbours if corporal chastisement, so common among our ancestors as a penalty for minor violations of law, might not be revived, with signal advantage to society, for the punishment of certain specially atrocious crimes.

GENERAL.

All reports from France and Italy agree that the silk crop in those countries will be more abundant this season than for the past ten years. Advices from different districts in Japan, announces that only about four hundred and fifth thousand cartons will be manufactured this year, and, as a considerable quantity will be required for home use, it is expected that the cards available for exportation will realize very remunerative prices.

At the sale of a herd of a noble stock owner in England, the other day, two young bull calves of the purest bred short-horned family to be found in Britain, and with a pedigree back to the fifteenth generation, were sold to the owner of a Californian ranch for 800 guineas apiece. The owner had his costly purchases conveyed to town in a special waggon, and then had their lives insured at a high premium before starting them on their long westward journey.

A Hugoistic sketch: He was a newspaper man. He carried a big club in his hand. He walked firmly and determinedly up stairs to the composing room. He had a bad look in his eye. He walked straight up to where the intelligent compositor was eagerly butchering manuscript. He raised his club on high and felled the i. c. to the floor. He clubbed the i. c. into a jelly. He was arrested and tried for murder. He asked for a jury of newspaper men and got it. The jury, without leaving their seats, brought in a verdict of justifiable homicide.—Solid.

No Christian grace is likely to be called into play more frequently than that of Mutual forbearance. If we resent every apparent injustice, demand the avenging of every little wrong, and if all the other persons in the circle of our acquaintance claim the same privilege, what miserable beings we shall be! We need to guard against a critical spirit. Some people carry a microscope fine enough to reveal a million of animalculæ in a drop of water, and with these can find countless blemishes in the character and conduct even of the most saintly dwellers on earth. Bear and forbear is a good rule for all.

AGRICULTURAL NOTES.

Composting is the art of mixing organic matter, such as straw, muck, dead animals, etc., that must undergo decompsoition before they become available as plant food, with inorganic matter that will absorb and retain the valuable gases that the organic matter would otherwise let pass into the air and thus be lost. Such a mixture must be kept moist, but not exposed to rains that would wash away the valuable soluble salts. Stable manure and muck make an excellent basis for a compost heap, with which ashes, leached and fresh lime, weeds (not in seed), waste matters, etc., can be mixed.

Lice on Stock.—A number of letters ask for remedies for lousy stock. Vermin of some kind very frequently infest domestic animals; they are mostly of the louse type; small parasitic animals that must be removed by the application of some insecticide. A number of substances have been used to a greater or less extent, of which a few are mentioned below:—One pound of Tobacco and six ounces of Borax boiled in two quarts of Water, to which Soft Soap enough is added to make a thick paste, has proved a good vermin salve. A mixture of Carbolic Acid and Soft Soap in the proportion of one to four makes a compound easy to apply, and very effectual. Shortly after, the parts to which the soap mixture has been applied should be washed with pure water and a non-drying oil rubbed on. Oil of Turpentine and Lard Oil, equal parts, with a little Carbolic Acid, is perhaps the most convenient mixture to make, and effectual in its application. Animals that are affected with vermin need better care and higher feeding in order to overcome the drain that those parasites make upon the system.

Nutriment in Fruit.—The mind grasps values by comparison. The chemist tells us that an egg weighing an ounce and a half is equivalent in food material to 17 ounces of cherries, or 22 oz. of grapes, 30 oz. of strawberries, 40 oz. of apples, 64 oz. of pears. We thus see that fruits are not very solid food. But we do not think any the less of cherries, apples, and pears, because they are not as concentrated in nutritive elements as the egg. They are no less a part of the best food of the human race, and most persons will continue to eat them.

Preparing and Seeding Ground for Meadow.—The practice of sowing grass and clover alone without any so-called foster crop is becoming general. It is found that the supposed nursing crop has quite a different effect from fostering or encouraging the tender grass, but chiefly robs and destroys it, unless the soil is unusually rich. The more successful practice is to prepare the soil by thorough ploughing—rolling if necessary, and harrowing so as to procure a fine tilth, and sow the seed early in the spring, without any accompanying crop. The preparation of the soil in the spring is completed by a dressing of fine manure, and a thorough harrowing, a shallow ploughing being given if necessary. Harrowing will be sufficient in the majority of cases. After a fine harrowing the seed is sown. A mixture will be found most satisfactory. Mixed crops, as a rule, yield in proportion to the increase of seed. Thus, a usual seeding of Timothy or Clover, or both, will give a certain quantity of hay; if Orchard-Grass is added, a crop of hay will be taken equal in amount to that expected from the Timothy or Clover, but two or three weeks earlier. A second crop may be taken later, of which the Timothy will furnish the bulk, and the Orchard-Grass will fill up the bottom. If Kentucky Blue Grass is added, or Rhode Island Bent, a later crop will be given, which can be mowed for rowen, or will give the best fall pasture without injury to the roots of the Timothy or Orchard-Grass. The mixture here indicated is one that may be suggested for trial. It has been tried and found successful and desirable in all cases, and deserves a more extended application. The seed has been sown in the following proportions: One bushel of Orchard-Grass, one-half bushel of Kentucky Blue Grass, one-half bushel of Rhode Island Bent, ten pounds of Timothy, and six pounds of Red Clover. The Blue Grass appears later than the others, and fills up the vacant spaces left by the failing clover, which disappears after the second year. The advantage of the mixture is chiefly that a fine thick bottom is produced, which covers and protects the ground between the stools of the coarser grasses, and which furnishes a second crop for hay and a third for pasture. For soiling purposes the mixed seeding is even more useful than for pasturage, as the grass may be cut at any season without danger of injury from a dry spell. These particulars are more pertinent for the spring than the present season, yet if one would avail himself of them he must make preparation now, and not delay.

Grasses for Decoration.—A bouquet or vase of properly dried and tastefully arranged grasses of the more graceful sorts, is a very pleasing decoration for the parlour or sitting-room in winter. The beauty of a grass depends largely upon the delicacy of its flower clusters, and their graceful and orderly arrangement in the *panicle* or "head." As a type of beauty among the larger grasses, a long feathery plume of the Pampas Grass may be chosen, and indeed it is a very pleasing object when preserved in its original shape and colour. We must here enter a protest against the violation of nature by dyeing the plumes of grasses any colour whatever. They, to our taste, can not be improved upon by being coloured a deep crimson, an unnatural green, unpleasant black, or any other colour. Grasses for their greatest beauty should be gathered just as they are fully in flower, and hung up or spread out to dry in a place that is free from dust. If a grass is gathered after it is beginning to mature its seed, the floral parts will become brittle and soon fall to pieces, and fail to be the objects of beauty that they would be if gathered when just at the opening of the flowers. There are a number of native grasses that are worthy of a place in such a collection. In general, it may be said that any grass that is attractive for its delicacy, grace, and colour while growing in the field, will not be disappointing when it is tastefully arranged in the house.

"'Tis love that makes the world go round." It also makes the young man go round—to the home of his girl about seven nights per week.

Nicely coloured autumn leaves are worth fifty cents per hundred pounds to bed street car horses. Think of this as you feel the sad tears rising.

PERSONAL.

It is a touching piece of self-forgetfulness on the part of Queen Christina to name her baby Mercedes, for her husband's first love.

Christine Nilsson lately refused to sing for a "charity" at Aix-les-Bains, where she has been staying, declaring that charity began at home, and she was there to get rest.

At a recent English wedding the bride's nephew, dressed in a ruby velvet Cavalier suit, acted as page, holding the train; and the thirteen bridemaids wore mob caps, puffed sleaves, long mittens, and paste buckles.

Madame Barbault, who was lately married to Mr. Andrew Johnson, a relative of the late ex-President of that name, has a right to wear the title of Duchess of Bourbon. She has been for some years a teacher of French in Erie.

Miss Flora Sharon, who is thought to be a pretty and charming girl, the daughter of the Silver Senator, is to marry Sir Thos. Hesketh, who, making a yachting tour round the world, paused at San Francisco just long enough to take the prize.

The picture of Madame Gerster-Gardini's baby is described by a bachelor as being very pretty and winsome, which inclines one to believe it remarkably attractive. The child is taken asleep in a wicker carriage, over which is leaning the slender Italian nurse.

The King of Denmark has given the Bernhardt a gold medal surmounted by a crown in Diamonds, and attached to the red-bordered white ribbon of the Order of the Danebrog—a distinction very rarely granted, and but to two other women—Nilsson and Trebelli.

Dr. Tanner crops up in the pages of nearly every English periodical, and will be referred to in every new encyclopædia and thousands of medical works. If he has not got money, he has got, in six weeks, as world-wide a reputation as Wellington or Byron in as many years.

The Baroness de Hatzfeld, whose divorce, for no other cause than that an ancestress was at one time connected with the stage, is disgraceful alike to her husband and the German court, is not a daughter, as was recently stated, or any blood-relation whatever, of Madame de Hegermann Lindencrone, the wife of the Danish Minister, but the sister of her first husband, Mr. Charles Moulton, and the daughter of Mrs. Charles Moulton, *nee* Metz, of Paris.

Sir F. Roberts, the conquering hero of Candahar and so-styled "Saviour of Afghanistan," is son of a clergyman of the Established Church in Waterford, Ireland. His brother, Samuel U. Roberts, is one of the Commissioners of the Board of Public Works in Ireland. Sir F. Roberts is a member of the order of Good Templars and a staunch teetotaler. He has a Good Templar lodge attached to every regiment under his command. Sir Garnet Wolseley is also a total abstainer.

The daughter of an official in high life in Vienna recently wore several times a superb dress of dark green material, trimmed with wreaths of leaves in another and lighter shade of green. During the season the beautiful complexion of the young lady underwent a sudden change, and was ruined by a painful and offensive eruption. After a time her physician, baffled by the symptoms, thought of the dress, had it subjected to a chemical examination, and found enough arsenic in the colouring to produce all the mischief, and a great deal more.

Dora Young, a favourite daughter of the Prophet, and one of the heirs of a large portion of his property, was lately to be seen at a Chicago hotel, and is described as a fine looking person, dressed in good taste in black satin and brocade, with costly rings on her shapely hands. Her manners are pleasing, and her conversation interesting. She is attached to the memory of her father, although she is no longer a Mormon, calls the system a dreadful one, and says that the Mormon wives, under their outward semblance of good-will, hate each other with a deadly hatred.

It is understood that Lady Burdett-Coutts will be given away, on the occasion of her marriage, by the First Lord of the Admiralty. The grandmother of this lady was a servant in the house of a brother of the old banker, Susan Starkie by name. He had her carefully educated, and then married her. Her daughters became Countess of Guilford, Marchioness of Bute, and Lady Burdett. Mr. Coutts' second wife figures in *Vivian Grey* as Mrs. Million. A brother of the Baroness died lately, without a will or any record of his property, and in his room were found two hundred and fifty thousand pounds in Bank-of-England notes.

The Princess Beatrice is so marked in her attentions to the ex-Empress as to strengthen the popular belief that she was intended for her daughter-in-law. The Princess was the first to meet the imperial lady on her return from Africa, going aboard the ship. Lately the ex-Empress spent a couple of days at Osborne, the Princess crossing over to Portsmouth to escort her. They walked about the grounds in the mornings, and rode with the Queen in the afternoons. It is understood that the ex-Empress makes her future home at Arenenberg, her villa on Lake Constance—a place already full of romantic and unfortunate associations.

An English earl who, ever since the wedding of the Duchess of Edinburgh, has desired to have in his family a necklace like the one worn by the Empress of Russia on that occasion, but who had been deterred by the simple fact that the Czarina paid nearly a million dollars for hers, happened to mention his wish to Mrs. Mackay, of Bonanza fame, in Paris, and was advised by her to look at diamonds in America. He has obeyed her instruction, and, for the sum of one hundred and sixty thousand dollars, is about to become the possessor of a necklace of fifteen magnificent white stones, ranging in size from that of a filbert to one three times as large, and matchless in brilliancy, together with a pair of solitaire ear-rings and a brooch, in which seven large diamonds and sixteen smaller ones imitate one of the earl's heraldic emblems.

Dangers of the Sea.

The difference between handling a ship so that she escapes a danger and in a way to plunge her headlong upon it was doubly illustrated on her last passage by the Algeria which has just arrived in New York from Liverpool. On her sixth day out the Algeria found herself in a heavy fog on the Banks of Newfoundland. The ship was feeling her way cautiously along, all eyes and ears, so to say, when from over the port bow there sounded a fog bell. It seemed some distance off. But Capt. Gill, swift as light, ordered a reverse of the engines. The screw flew round, the great ship paused, slowly backed, and none too soon. In a trice there loomed up through the fog a huge three-masted schooner rushing forward under full sail. Had the course of the Algeria been kept, had she failed to retreat at the moment she did, a collision would have been inevitable. The schooner flew on her way straight across the foaming wake of the steamship, and a terrible calamity that might have cost hundreds of lives was happily averted. Very nearly the same thing happened again on the same evening, the dangerous craft that approached the Algeria in this instance being another large steamer. This time the stranger was not seen through the dense mist, but the voices of persons on her decks were heard with startling distinctness, and the escape was apparently as narrow as in the case of the schooner. Eternal vigilance is as clearly the price of safety at sea as it is of liberty everywhere.

A Small Baby.

The Smyrna, Del., *Times* of last week contains the following: "Our town has a baby that has attracted the attention of the curious—men as well as women. It is a girl babe that came to the household of Mr. John Van Winkle, on Tuesday morning of last week, which weighed a pound and three-quarters, is 12 inches long, and is perfect in every way. Its wrists are about the size of a man's index finger, and a shoe one and a half inches in length will incase its foot, its head is about the size of a ball of wrapping cotton, and its body not larger than a man's wrist. It is queen of the household it doing well, and the physicians have hopes of itsbeing able before long to paste its hair on its forehead and pilot some unfortunste youth to an ice cream saloon.

"Yes," said Mr. Profundity, "it is the silent forces in nature that are the most potent. It is the silent strength of gravity that binds the world together; it is the silent power of light that gives life and beauty to all things; it is the silent stream that is deepest; it is—" "It is the still sow that gets the most swill," Mrs. P. put in, seeing her liege lord had got to the end of his rope of similes. It was kind of her, but it somehow spoiled the effect of his dissertation.

WOMAN GOSSIP.

Fashion Notes

PLAIDS will be the rage.

POLONAISES are very short.

POLKA-DOTTED hose are fashionable.

BUSTLES are worn with all street costumes.

DOTTED fabrics of all kinds are to be worn.

STRINGS of pears are braided or coiled in the hair.

GOLD and silver tinsel will be exceedingly fashionable.

THE Jersey and Pilgrim suits are both English in origin.

TWILLED all-wool delaine is a very popular fabric this autumn.

THE Derby hat will be very much worn again this autumn.

QUILTED petticoats of satin or farmer's satin will be worn.

OLD FASHIONED neckerchiefs are very popular with the ladies.

POWDERED hair will probably be one of the revivals this winter.

LONG plumes and broad ribbons are the soul of millinery this season.

MANY of the most elegant evening dresses will be made short this winter.

FELT skirts are very handsome this year, and come in all the new shades.

ORIENTAL coloured plaids of mammoth size distinguish many of the new goods.

JOCKEY costumes, consisting of long coat-basque and plain skirt, are stylish.

BEAD-EMBROIDERED belts are worn with the round waist, so fashionable this year.

HANDKERCHIEF dresses, of woolen fabric, will be exceedingly popular for fall and winter wear.

PLACQUE buttons, in the centre of which is a bunch of grapes or other fruit, are handsome.

JERSEY webbing or stockinet, in all the new colours, is sold by the yard for corsages and sleeves.

CROWN braids and puffs are entirely out of date, the fashionable coiffure being very flat and smooth.

CASHMERE-COLOURED buttons and belt buckles are seen on the Oriental costumes so fashionable at present.

CORDS, both beaded and plain, will be largely used in trimming polonaises and outside wraps this fall.

RICH, stiff, white satin, brocaded in silver or gold, is the appropriate fabric for an elegant wedding dress.

WIDE Josephine belts are worn with almost all costumes. These are sometimes laced in front and at the back.

Wafts.

"THE sun shines for all," while the moon looks placidly down on a few spooney couples.

WHAT is the difference between a fixed star and a meteor? One is a sun, the other a darter.

WEDDING cards are to be smaller than ever and made as plain, quiet, and genteel as possible.

MARRIED life reaches its acme of happiness when a woman can eat crackers in bed without any complaint from her husband.

IT is the dastardly young brother who remarks: "Sister Sal's all the fashion now. She wears a horse-belt round her waist, and I expect she'll soon have a saddle and bridle."

FROM the satisfied expression that often illuminates a lady's face while she is gazing in the mirror, the superstition has grown that mirrors are in the habit of giving women "taffy."

THE astonishment of the lightning when Aja defied it was nothing as compared to the feeling of the young man who makes his best bow to a bevy of young ladies, and bursts a suspender button in the act.

AT a recent marriage the bride was a young damsel who had been a great flirt. When the clergyman asked the usual question, "Who gives this woman away?" a young fellow present exclaimed, "I could, but I won't."

"O, MR. LINGERIE, you've got on your freckled stockings!" exclaimed a sweet child, on the Ocean house piazza, where that gentleman was the centre of an admiring feminine group; "and Cousin Julia says they just match your complexion!"

TODDLEKINS is a very small man indeed, but he said he never minded it all until his three boys grew up to be tall, strapping young fellows, and his wife began to cut down their old clothes and cut them over to fit him. And then, he said, he did get mad.

"WHAT do you suppose I'll look like when I get out of this?" indignantly inquired a fashionably-dressed young lady of a conductor of a fearfully overcrowded car the other day. "A good deal like crushed sugar, miss," said the conductor. And the lady stood up and rode four streets further, with the smile of an angel.

No Bitterness.

THE QUIET WAY IN WHICH TWO OLD GENTLEMEN DISCUSSED POLITICS.

[Petroleum World.]

Grandfather Lickshingle and Deacon Redspinner, two patriarchs in this community, were walking down the street together yesterday. It was remarked that two such venerable men were not often seen together, and people raised their hats to them as they passed along and spoke to them reverently.

"There's entirely too much bitterness in this campaign, deacon," said Mr. Lickshingle, "and I regret it exceedingly. Now, when we wuz young men, and took an interest in politics, we had none of this 'ere everlastin' cat-haulin'."

"Indeed we hadn,t," acquiesced Deacon Redspinner. "Take Jackson's campaign for instance. There wuz a lively interest taken by both parties, but there wuz none of yer bullyraggin' like we see now-a-days."

"That's a fact, deacon," said old Lickshingle, "but, between me and you, I never thought much of Jackson."

"He was a mighty good man, Lickshingle."

"He was small potatoes compared to some men we have now, deacon."

"Who d'ye mean," demanded the deacon.

"Well, there's Garfield," said Lickshingle,

"Garfield be danged. You know mighty well, Lickshingle, he couldn't have been elected hog-rieve in a hill town in Jackson's day."

"He's a darn sight better man than Hancock."

"Go slow, Lickshingle, go slow!" said the deacon, somewhat agitated.

"Oh, I know what I'm talkin' about," retorted Lickshingle, as he stabbed the pavement spitefully with his hickory cane. "Hancock's a stoughton bottle, that's what he is."

"An' what's Garfield? Great guns, what's Garfield? Didn't he lay a Cheap-John sort of a pavement around the capitol and charge the government $1,000,000 for it?" and the deacon's eyes blazed with indignation.

"See here, deacon! Look at your man Hancock's letter to Sherman. Didn't he try to blow up Washington with glycerine? Say, didn't he? Oh, I read the papers old man, an' know what's going on."

"Hancock's a good an' pure man. Didn't he fight like a bull-dog in the war of the rebellion? Where was Garfield skulkin' in the time of disaster? In Canady, by thunder, in Canady!"

"What wur Hancock doin' with a stiletto in his boot the night Lincoln was murdered? Answer me that. If Wilkes Booth had failed this Hancock was ready to finish the job. Don't talk to me! Don't talk to me!"

"It's a lie!" howled the deacon, as he whirled around and faced Lickshingle on the street.

"It's as true as holy writ, an' any man's a liar that says so," retorted Lickshingle, too much wrought up to be particular as to his phraseology.

"You're a bald-headed old scroundrel," yelled the deacon.

"You're an old leper, an' I can wipe the ground with you," howled Lickshingle, gripping his cane and advancing.

Friends jumped in and the two furious old men were dragged away in opposite directions. The deacon squirmed around in the arms of his captors, shook his cane at Lickshingle, and hissed:

"Your man Garfield would never have gone into the army if he he hadn't been drafted, and he wouldn't then, only he thought he would be able to desert—the onery son of a gun!"

THE late Rev. Dr. Symington, not feeling well one Sabbath morning, said to his beadle who was a "character:" "Man Robert, I wish you would preach for me the day." "I canna do that," promptly replied Robert, "but I often pray for you."

Jupiter in Perihelion.

Jupiter reached its perihelion, or nearest point to the sun on Saturday. This is an astronomical event of considerable importance, as it occurs only once in about twelve years. As the planet is some millions of miles nearer the earth than usual, an excellent opportunity is given for the study of its features. Even the smallest telescopes will now show some of the wonders of this great planet and it system of satellites, and, with large telescopes, astronomers hope, within a month or two, to add much to our knowledge of the chief member of the sun's family. Jupiter will remain the leading brilliant in the sky throughout October, shining so brightly that even Sirius must temporarily yield the palm.

There is another reason for the interest that Jupiter's arrival at perihelion excites. More than a year ago some professed scientific person on the Pacific slope wrote a pamphlet on the terrors of the perihelia of the four great planets Jupiter, Saturn, Uranus, and Neptune, which, it was represented, would occur nearly simultaneously, and with these planets in conjunction, fearful results to the earth were predicted. The false alarm was spread by other pretended savants, and, no doubt, awoke the fears, not merely of the ignorant, but of persons who knew enough of astronomy to be aware of the gigantic attractions that the planets exert upon one another. Stories of plagues, pestilence, famine, and death were based upon the supposed influence of the perihelia. Mr. Proctor and other astronomers sought to counteract the effect of this by showing, in the first place, that it was not true that the planets named would all be in perihelion together. In fact, Saturn does not reach its perihelion until 1885. Uranus will be in perihelion next spring, but Neptune, will not reach its nearest point to the sun until six or seven years hence. It was also denied by scientific men of high authority that there was any reason to fear evil results to the earth, even though the predicted perihelia should occur very near together. Still, alarm was felt, and no doubt, many persons will be pleased to know that Jupiter, the most powerful of all the planets, has reached the dreaded perihelion point, and is already turning to retrace his steps, without having in any way injured his sister planet, the earth.

That the sun has felt the approach of the great planet, was shown in the prevalence of vast sun spots and outbursts of gaseous matter, is not improbable, and through the reflex action of the sun upon the earth our our planet may, even now, feel the same influence in violent atmospheric phenomena. It is difficult to realize the enormous power of the bright speck, Jupiter, shining so quietly in the sky. A recent writer has shown that the power which the sun has to put forth to hold Jupiter in his orbit is equal to the combined strength of 170,000,000. bars of steel, each one a mile in diameter, Jupiter's pull upon the earth, according to the same authority, is equal to the strength of 23.000,000,000 bars of steel, each of them one foot in diameter. So, if the mere power of gravity were all that was required to make Jupiter's approach dangerous to the earth, evidently he is not lacking in the power. But no one need fear that the sisterhood of worlds which acknowledge the dominion of the sun will prove mutually destructive.

A Musical Cat.

This is time of the year when stories about "musical" cats, mice, etc., are started. The following is the latest: "A cat in Buckfield, Me., has developed an extraordinary discrimination in Music. The playing upon the pianoforte of all pieces, except 'Sweet Afton,' is listened to by her with indifference, if not satisfaction, but the sentimental melody above mentioned falls little short of moving her to tears. Wherever the cat may be when this tune is begun, she at once appears to the household, her face expressing the contention of painful emotions, and by violent rubbing against the persons of the members of the household, accompanied by every indication of distress, she mutely beseeches that the tune may be changed. Singing the song, or even whistling it, equally grates upon her sensitive nerves, and causes her equal pain. The only theory which at all accounts for this singular dislike of the particular tune is that which supposes that the soul of the 'Mary' who is celebrated in the ballad has, in the course of successive transmigrations, entered into the cat, and that the memories awakened by the song are too much for it." Next!

ALL SORTS.

An Ode to a Lot of Stovepipe

Infernal stuff, your nature well I know,
So, when I took you down six months ago,
Each piece I numbered so that I might tell
Exactly how you'd go together well.
And now the time for chilly days draws nigh,
To put you up again I madly try.
But all in vain. The joints that then did fit
Now do not come within an inch of it.
I get you two-thirds put in place and then
Crash you go tumbling to the floor again.
Once more I try. You're rather full of soot,
And I am getting daubed from head to foot.
I jam my thumb, but still I persevere,
One piece goes down again and rakes my ear.
I grab to catch the piece, another goes,
And, falling, scrapes the hide all off my nose.
And then another piece falls with a slam,
And then the rest goes down and I say
"Dam."
And then my blood gets boiling and I say,
By all that's blue, I'll fix you anyway.
Once more I go to work. By patience great
I get all but a single section straight.
And that I am about to place, when oh!
The chair I stand on tips. Down flat I go;
While on and round me, with a horrid crash,
The whole comes down again in one grand smash.
And then my wife remarks: "I never saw
A man so clumsy!" I say, "Hold your jaw!"
And for a man send, while I retire
To wash myself and swear, to vent my ire.

WHY shouldn t a puppy ride in a dogcart?

WHERE to go when short of money—Go to work.

THE man who died in harness probably forgot to shuffle off his mortal coil.

THE baker's business should be profitable, a good part of his stock is rising while he sleeps.

"HE sleeps where he fell," says a late ballad, which suggests that he must have been drunk.

NIAGARA FALLS are three feet lower than they were fifty years ago, but the hack fare is hire.

IT is absurd to suppose that a man can speak above his breath, since his mouth is below his nose.

THE law can never make a man honest; it can only make him very uncomfortable when he is dishonest.

AN ingenious locomotive engineer has just patented an improved "spark arreste." Here is another enemy to the course of true love.

DINER (sniffing)—"Waiter, I really think this fish is not fresh!" Waiter—"Yessir; can't answer for that sir! I've honly been 'ere a week, sir!"

"WHAT a blessing it is," said a hardworking Irishman, "that night never comes on till late in the day, whin a man is tired, and can't work any at all at all."

HOW time changes! In the good Old Testament days it was considered a miracle for an ass to speak, and now nothing short of a miracle will keep one quiet.

ANOTHER poet comes forward and says: "And I hear the hiss of a scorching kiss." Beats all what a man can hear if he is only mean enough to listen.

ALLUDING to Beecher's estimate that one female house-fly will lay twenty thousand eggs in a season, *The Church Union* thinks "it is a pity a fly couldn't be grafted on a hen."

WHAT is life? In infancy, a battle with colic; in youth, a struggle to keep out mischief; in manhood, a struggle with indigestion; and, in old age, the prelude of a contested will case.

NOT many miles from New Bedford a small company of coloured brethren decided "to take up a collection." The presiding officer offered to pass the hat himself, and, in order to encourage the others, he put in a ten-cent piece. After the collection, during which every hand had been in the hat, the president approached the table, turned the hat upside down, and not even his own contribution dropped out. He opened his eyes in astonishment, and exclaimed: "Fo' goodness, but Iz'e eben loss de ten cents I started wid!" The case called for urgent action. The presiding officer demanded the restoration of the ten-cent piece. But nobody came forward. After an impressive pause, a brother remarked, solemnly: "Dar 'pears to be a great moral lesson roun' heab somewhar."

THE CANADA LUMBERMAN

AND MILLERS', MANUFACTURERS', AND MINERS' GAZETTE.

ISSUED SEMI-MONTHLY AT TORONTO, ONT.

A. BEGG, - Proprietor and Editor.

TERMS IN ADVANCE (Post-paid):

One Copy one year..... $2 00
One Copy six months..... 1 00

ADVERTISING RATES

$1 50 per line per year; 85 cts. per line per six months; 50 cts. per line per three months.

Small Advertisements 10 cts. per line first insertion; 5 cts. per line each subsequent insertion.

Business Cards, Forms of Agreement, Bill Heads, &c,. promptly supplied to order, at the LUMBERMAN Office.

Communications, orders and remittances, should be addressed to A. BEGG, LUMBERMAN Office, 33 Adelaide Street West, Toronto.

TORONTO, ONT., OCTOBER 15, 1880.

We ask the indulgence of our patrons for the want of completeness in the management of the LUMBERMAN this week.

This copy of the LUMBERMAN is sent to several parties on whom our agents have not had the opportunity of calling. We will be pleased to have them all become subscribers, and to receive their subscriptions by return mail.

THE TANBARK TRADE.

This is a large and important industry, which concerns the general public more than would appear without close examination. During the present year, in the provinces of Quebec, and Ontario, as well as in the Maritime Provinces, there has been great briskness in the hemlock bark-trade. The expansion of other leather trade has created a larger demand for tanbark, than usual, for home consumption, and a very large traffic has been going on in the export of this article. It is reported that over eighty thousand cords of hemlock bark have now been sent across the lines from the Provinces of New Brunswick and Quebec, whilst our neighbours are saving their own hemlock forests for future use. Large quantities have also been exported to Chicago, Detroit, Buffalo, &c, from Ontario. The result of this is evident, namely: The extinction of our hemlock forests in a very few years, and the consequent closing of tanneries, with increased price of leather. The question is well worth the attention of the Dominion and local Governments. It has been suggested that an export duty should be placed on bark exported, and that the local Government should impose stumpage dues on hemlock trees cut for the purpose of having its bark exported, and also an export duty on extract of hemlock bark exported.

A New Brunswick paper speaking of the export trade, says: "We would press upon the Local Government the expediency of doubling or trebling the stumpage on bark for extract purposes. We would urge this because at the rate at which our hemlock bark is now disappearing, there will soon be none left for our own tanners. But these do not we believe use the extract, the latter which being exported, and fetching something like $25 per barrel. There are several parties engaged in New Brunswick stripping our forests of the bark, and some of these, we may instance the Shaw Brothers, come over here for bark, with which they supply their tanneries in Maine, while in that state there is yet much hemlock. Of course so long as they are allowed to strip our forests, they will do so, and when they have left nothing even for our own local tanners, they will then turn to what is standing in Maine; they will be able to undersell our tanners in the leather market, because our manufacturers then will have either to bring hemlock bark from afar, or use the inferior article. We cannot impose an export duty, but we can *treble the stumpage on bark for extract purpose*, which is the bark for export.

Another writer says: "It is claimed that hemlock, which will ultimately be of value as a commercial wood, is being destroyed; also by being left where peeled it offers a means of feeding forest fires and is, therefore, a source of danger to the more valuable standing timber. While admitting that there is some force in all this, it is well to look at the other side of the question. The objections hang upon contingencies, such as the prospect of our ever been obliged to fall back upon the hemlock for commercial purposes, and the risk of forest fires. On the other hand, we have the positive benefit to a large number of people which the bark industry undoubtedly is."

The *Moncton Times* remarks: "When the tree is stripped of its bark, it is left to rot in many cases. Of course the traffic in the bark is a source of profit to the shippers, but it may be questionable if it is wise to destroy our hemlock woods in such a wholesale manner, largely for the supply of the foreign markets. A correspondent suggests that an export duty be placed on the bark, which would be calculated to lessen shipments, and create new tanning industries in the province, thus keeping all the profits in the country."

"LOSS ON SQUARE PINE TIMBER."

The Commissioner on Crown Lands for Ontario in his able report for last year, says:—

The following will shew the estimated loss to the Province and the Revenue from waste in getting out square pine, from 1868 to 1877, both inclusive:—Total quantity taken from public and private lands during the ten years, 119,250,420 cubic feet; waste, one-fourth of each tree, equal to one-third of the total mentioned, viz.: 39,750,140 cubic feet, or say in round numbers 477 million feet board measure, which may be valued one-half at $10 per 1,000 feet, and one-half at $5 per 1,000 feet, representing relatively the prime timber beaten off and the inferior timber from the upper part of the tree, average value say $7.50 per 1,000 feet, equal to $3,577,500 loss to the Province for the ten years, or an annual loss in material wealth of $357,750,00.

The quantity taken from public lands during the ten years is 87,620,135 cubic feet, the waste on which on the basis given being equal to 29,206,711 cubic feet, or 350 million feet board measure subject to crown dues at $750 per million feet equal to $262,600 lost to the Revenue during the ten years, or at the rate of $16,150,00 per annum.

The loss to the country and revenue from timber destroyed by fires which might have been confined to a limited area, and possibly extinguished, before great damage had been done to the forest. had they not been fed by the debris of trees left to rot and dry, is incalculable."

NOVA SCOTIA CROWN LANDS.

The law regulating the prices of Crown Lands in the Province of Nova Scotia, pass-10 April, 1880, is as follows:—

1. The distinction between Crown Lands applied for for lumbering purposes, and Crown Lands applied for for agricultural purposes, are hereby abolished, and the price of all Crown Lands is reduced to forty dollars per hundred acres, and twenty dollars for any quantity of fifty acres or less.

2. The price of Crown Lands which have been improved and occupied for two years and upwards previous to the passing of this Act shall be twenty dollars for each hundred acres, or for each tract of less than one hundred acres, provided such price be paid on or before the first day of May, A. D., 1881.

While boring for water at Beeton Station on the Hamilton & North Western Railway, last week, at the depth of 40 feet an inflammable gas was reached, which took fire at the well's mouth in the evening, as a party was igniting a match to light his pipe. A pipe was placed over the bore, and the gas continued to burn, with a pale-bluish light. It is expected that petroleum will be found on digging deeper.

LUMBERING ON THE PACIFIC COAST.

A correspondent of the Muskoka *Herald* says this is the way they do things on the Pacific Coast (Puget Sound.)

The potato crop once gathered, the ravages of frost and rot are checked by drying, the machine known as the "Plummer Dryer" being the most effective for this purpose. A bushel of potatoes will produce thirteen pounds of the dried article. They are bought in immense quantities to go to the mines and saw-logging camps. No ship leaving that coast is considered "well found" unless they have a quantity on board for the use of the ship's crew. It is said that at present prices, which I have been unable to learn, a good margin is left for both grower and dryer.

Saw-logging in that region is carried on somewhat differently to what it is here. When all orders have been filled, stock lumber is cut pretty much as follows: Butt log, 24 feet; second, 32 feet; then 40 feet, until stopped by knots. The roads are graded 16 feet, with a skid let in across the road every 8 feet. The logs are barked when the sap is up—failing this they are "rossed" on the running side. Four yoke of oxen constitute a team, the hind yoke having a tongue and dog chain. The logs are strung one behind the other, with dogs and chains; one log, however, containing 6,000 feet, being considered a load. The greaser goes ahead of the team, with a swab and can of dog fish oil, and greases the skids. With regard to the wages paid, the chopper, who stands on a spring board while working, receives $75 a month and board; hook tender, who snips the ends of the logs, drives the hooks and attends to snatch blocks and snubbing lines, gets $50; sawyer, $60; barker, $35; head skidder, $40; second skidder, $35; teamster, $75; swamper, $40; greaser (a boy), $20. All payments are made in gold. Land that has less than 200,000 feet to the acre is not considered pine land A stock was lately cut out of a saw log in the mill at Tacoma, which measured 34x14 inches, and 120 feet long.

The *Mail* in arguing that additional facilities are required for prospectors obtaining reliable assays of ores, adds that a correspondent had written to Buffalo on the subject, and found that it would be necessary to obtain a consular certificate before minerals could cross the lines. American authorities charge a fee of $10 for an assay and certificate, and our correspondent says they require a statement of the locality in which the mineral was found. Of course such information would be quickly acted upon by American speculators, who already own the bulk of our mining properties. There appears to be a lack of mining authorities qualified and willing to furnish assays, and it would be in the public interest if the Provincial Goverment would appoint an officer to perform this necessary work for moderate fees.

The 3rd day of November next, has been appointed, as a day of general thanksgiving in the Dominion. for the bountiful harvest, with which the country has been blessed this year.

England vs. Australia.

Outside "the Derby" no such national gathering—estimated at from two hundred and fifty thousand to five hundred thousand—was ever assembled in England as at the great cricket match of England vs. Australia. Kennington Oval, where it took place, is a large space about four times the size of Tompkins square. Around this space, at a hundred feet from its outer circumference, was a solid ring of beholders, dozens deep. The inner rows squatted, the next knelt, the next stood, while the outer fringes formed the highest tier by scaffolding run up impromptu. Then the old and picturesque houses surrounding the oval were ridged and fronted with spectators, as was Rome when Coriolanus marched in. The gate money was five shillings. The receipts were enormous, and were divided between the teams. The colonials were badly beaten. Spofforth, their best man, was prevented playing by a wounded wrist.

Indian Farms in the North West.

SUCCESSFUL RESULTS OF THE GOVERNMENT'S EXPERIMENTS.

[Saskatchewan Herald.

The following figures show the progress made in some of the Indian farms and reserves in the west:—

At Fort Walsh there are two reserves—one of Assiniboines, numbering a thousand souls, under Chiefs Man-thet-Stole-the-Cato and Long Robe; and one of Saulteaux, also a thousand strong, and Chiefs Little Child and Pie Pot. On one of these reserves there are fifty and on the other thirty-five acres under crop, chiefly potatoes and barley. The instructors here have no farms of their own to look after, but devote their whole time to teaching the Indians. These Indians also do a good deal for themselves by catching fish in winter.

At Fort Macleod there is a Piegan reserve on which there are about nine hundred of that band. They are settling down to work, having a number of houses up, and from 70 to 80 acres under crop. The cattle to which this band is entitled under the treaty were being given to them. The Rev. Mr. McKay has settled amongst them and established a mission of the Church of England.

The Sarcees are settled at Blackfoot Crossing, and although few in number are doing well.

At Morleyville, Bow River, there areabout six hundred Assiniboines, who have some excellent farms, doing credit to the practical instruction by their missionary, the Rev. Jno. Macdougall, in former years. Cattle were also being given to this band and to the Sarcees. The quantity of land under cultivation is from sixty to seventy acres.

The supply farm near Fort Calgary is expected to show good results and to fulfil the expectations formed of it. It is under the management of Mr. Wright, and contains two hundred and twenty acres, chiefly under wheat and barley.

Mr. Bruce has charge of another supply farm thirty miles south-west of Fort Macleod, on which he has under cultivation two hundred acres of as fine land as is to be found in the North-West. Three miles off, on Pincher Creek, the Government has put up one of the Waterous Company's portable grist mill with which to grind the grain grown in that locality. It will in the end be cheaper than to freight in flour.

Many of the Indians at the south are surrendering some of the cows to which they are entitled and taking agricultural implements in their stead.

On Mr. Delaney's farm, Frog Lake, were planted 100 bushels of potatoes, 14 bushels of wheat, 20 bushels of oats, 30 bushels of barley, an acre of turnips and carrots; and on the reserve, 190 bushels of potatoes, 20 of wheat, 40 of barley, and a quantity of small vegetables.

On Mr. Williams' farm, near Fort Pitt, were planted 58 bushels of potatoes, 5 of wheat, 26 of oats, and 18 of barley; and on the reserve 240 bushels of potatoes, 14 of wheat, 38 of barley, and two acres of turnips and carrots.

We are without the exact figures of the Eagle Hills reserve, but understand that they are about the same, as in Mr. Delaney's district.

In order to prevent explosions of gas on board steam-ships, the Inspector of Mines for South Wales, Great Britain, suggests the employment of two pipes leading from the deck to each surface of coal, one of these pipes to carry down an adequate supply of fresh atmospheric air, and the other, by means of some suitable contrivance, such as a fan, to draw up what gas may accumulate below.

The project of a canal for ships from the Baltic to the North Sea, between the Bay of Kiel and Brunsbuttle, in the estuary of the Elbe, appears likely to prove a success. Its depth throughout is to be 20 feet and 9 inches, its width at the surface of the water 160 feet, and at the bottom 64 feet, the banks thus having a gentle slope. Provision is also to be made, by means of a peculiar system of locks and reservoirs, for increasing the depth of water to some 26 feet, whenever it may be desirable to do so, this depth allowing of the passage through the canal of the heaviest German ironclad afloat, namely, the Konig Wilhelm, a vessel of nearly 10.000 displacement, but drawing only 26 feet. In size this canal will not compare unfavourably with the Suez, the latter being 172½ feet wide at the surface of the water, 70 feet at the bottom, and about 26 feet deep.

OUR QUEBEC LETTER.

THE LUMBER BUSINESS IN THE ANCIENT CAPITAL—PRICES CURRENT—CONTRACTS FOR NEXT YEAR'S SHIPMENTS—MINING NEWS—A NEW INDUSTRY.

QUEBEC, Oct. 11th, 1830.—The principal part of the "Fall Fleet," is now in port, and wharves and booms at the upper end of the harbour are lined with timber vessels taking in the last cargoes which will be shipped from the Ancient Capital during the season of 1880. Lumber merchants are all busy in their coves, or in the town offices which are connected with the former by telephone and telegraph,—engaged in superintending the loading and shipment of lumber. When the last vessel of the Quebec timber fleet leaves port this fall, there will be left behind the smallest stock of lumber which has wintered here for many years. Even now there is hardly any stock held in first hands, so that there cannot be any extensive sales to report either at the present, or for some time to come.

If poor Jim Fisk were now here, and wanted to go in for one of his usual bold transactions, he would buy up all the remaining stock, and thus control the market. I wonder that some worthy imitator of the great New York operator has not appeared upon the scene here.

It is satisfactory to know that the leading shippers and brokers of Quebec have not only experienced a remunerative business this year, but are looking forward with "great expectations" to the operations of the coming season. I find that the best informed men in the trade are basing their calculations for the year 1881, upon the production of some ten million feet of lumber this winter in the lumbering districts of the Ottawa.

The contracts so far made by the Quebec brokers for next year's shipments are quite encouraging. The following are some of the principal

PRICES CURRENT:

Ohio Oak (sold for shipment in 1881) 51 cents per cubic foot; Michigan ditto., 50 cents; Canada ditto., (a good lot for early delivery) 49 cents.

Sales of timber actually in the market would command two cents more than the above prices.

Pipe staves have been sold at $300 per standard *mill*.

West India staves at $75 per *mill* of 1200 pieces.

Michigan Board Pine, 20 inch average, 33 cents; ditto., Red Pine, 55 feet average, 28 cents.

Elm is a drug upon the market, and will not command more than 22 cents.

Walnut, Black, can be had freely at 80 cents per cubic foot for large girths.

Michigan Pine deals, Firsts: $100 per hundred, standard of 27½ feet, or 2,750 feet, board measure. Seconds: Usual proportion and price.

All the above quotations have been carefully selected from the most reliable sources

SHIPBUILDING.

There is little or no reason to hope for a revival in the shipbuilding industry of this port, which a few years ago gave employment to so many thousands of our labouring classes. Mr. Baldwin has just laid the keel of a 800-ton vessel, but this will not give constant employment to more than about 100 men.

Mr. Dior, of France, who is now here in the interest of a proposed new line of steamers between this port and France, believes that the French Government will ere long remove the differential duty upon Canadian built ships. This step, he claims, would give rise to a fresh demand for wooden, Quebec built ships. Our business men do not happily pin much faith to this prospect.

MINING NOTES.

There has been a dearth of interesting intelligence from the Beauce gold mines during the last two months. With the return of spring 1881, operations will be resumed with renewed activity. A damper has of late been cast upon the prosecution of work in this region by the disputes concerning mining rights, given rise to by recent legislation of the Province of Quebec.

In another part of the Province, the shaft of a very promising antimony mine is being put in working order.

The Crown Lands Department of the Local Government will sell by auction this week, a number of valuable timber limits in various parts of the Province. The sale will be held in this city. For some months past there has been a constant demand for small mining locations, which the Crown Lands Department is authorized to sell, to the extent of lots of 400 acres. Mica has recently been discovered at a short distance from Joliette, in paying veins, and only needs the skilful application of a small capital to return a lucrative yield.

It may not be generally known, that an English company has secured 400 acres of land in Charlevoix, containing oxide of iron in abundance, which it is their intention to mine, and ship to England for manufacture

The Local Government has on hand, a scheme for buying phosphates, and distributing them instead of money grants to the various agricultural societies of the Province. This policy will, undoubtedly, by introducing this useful article to the farmers of Quebec, create in the immediate future increased demand for the fertilizer, and thus give an impetus to mining operations. In a future letter, I hope to give more details of the scheme.

FRENCH CAPITAL.

The Credit Financier of Paris, France, opens its agency in the city next January. Five millions of dollars in gold will be at once brought into the Province, to be succeeded by as much more as can be judiciously invested in mortgages at 5 per cent. Whether or not it will prove to be, a undoubted blessing to have our land and buildings mortgaged to a foreign power, I leave others to decide.

Thanks to the energy and enterprise of a liberal minded, and leading business man of the ancient Capital, Quebec is shortly to have in its midst, an important branch of a new industry. The Canada Company is the title adopted by the proprietors of the new undertaking, which will engage in distilling liquors and syrups, liqeurs, acids, perfumes, &c. Some of the products of the new industry, will be upon the market in a few days from present writing.

STADACONA.

PORT HOPE.

This has become an important shipping port, and is the outlet of the vast region north and north-west by the Midland Railway. Our correspondent sends the following statement of shipment to Oswego, for the season up to Oct. 8th, viz: Lumber 62 million feet, pine; value from $8 to $16 per M Barley, 350 000 bu. Iron, ore, 1,200 tons, sent to Fairhaven. Square timber, 500,000 c. feet, rafted for Quebec. In addition to the above, over one and a-half million feet was exported from Port Hope one day this week.

Midland Railway rates to Port Hope for Lumber from Midland, Victoria Harbor, Sturgeon Bay, Waubaushene and Orillia, $1.75 per M., and from Peterboro' and Lindsay, $1.15.

NOVA SCOTIA.

Our correspondent at Parrsboro', a thriving place in Nova Scotia, writes:—"Our prospects here for this season, and first of next, are very good, boards and scantling bringing a good price in the English market at present. Short lumber, such as laths, pickets, and shingles, are in good demand in the United States, at fairly good prices, but the heavy duties against us there prevent us from doing much of any business that way. Next year's prospects, after the Spring sales, are not very encouraging, as there are heavy stocks being put in this winter.

We copy the following items connected with that section:

Messrs. Young & Son, of Parrsboro'—late of Calais, Me.—do the largest lumbering business in the county. They have mills at River Hebert, Apple River, Mose River, and Halfway River; the latter is a steam mill. Most of their lumber is shipped from this port. During the present year, this firm has sent several ship loads to French ports. Amos Lawrence, Esq., of Southampton, also exports a large quantity of lumber from here, and Messrs. Tucker and Adams, of the same place, engage quite extensively in this trade. Lumber is now sent from River Philip, via the I. C. R., to Spring Hill, and thence over the S. H. & P. R. R. for shipment. Add to this the coal brought over this road for home consumption and export, and it is not difficult to see that labourers find plenty of employment during the summer.

Shipbuilding, once the principal industry of this place, has been languishing for some time, and seems to have fairly died out.

NEW STEAM MILL.—Messrs. T. de Wolf, of Port Greville, and B. Annis, of Queen's Co., N.S., have a steam mill in course of erection at Diligent River, about six miles "down shore."

The large tannery, of Messrs. Upham and McCabe, east of the railway station, will soon be completed.

GRAVENHURST.

As a manufacturing and shipping point for sawn lumber, Gravenhurst occupies an important position, being the outlet by railway of the lumber from the Muskoka lakes and tributaries. Considerable trade is also done in tanbark, both for home consumption and export. Large quantities of supplies are going out to that region by the Northern Railway, and as many as fifty horses may be frequently seen in a drove, on the way to the lumber camps in the neighbourhood.

OTTAWA.

The value of sawn lumber exported from Ottawa during the months of May, June, July, Aug. and Sep.. 1877, is given at $859,-616; in 1878 at $686,671; in 1679 at $813,-211. During the year 1880, for May, June, July and August, the value exported is $100,-320. When September returns come to be added, it is expected that the increase over the five months of last year will be in the vicinity of half a million dollars.

TRAFFIC RETURNS.

The traffic receipts of the Midland railway for the week ending October 7th, 1880, were:—Passengers and mails, $2 673.82; freight, $8,468.03; total, $11.141.75. For the corresponding week of 1879:—Passengers and mails, $3,000.39; freight, $7,306.17; total, $10,305.56. Increase for week, $835.29. Aggregate from 1st January, $268.918.68; increase over 1879, $71,087.14.

The receipts of the Great Western Railway in the week ending on the 8th inst., and the corresponding week last year were as follows:—Passengers, $50,450.41; freight and live stock, $69,935.47; mails and sundries, $2,956.63; total, $123.332.51; corresponding week of last year, $102,504.49; increase, $20,838.02.

Receipts of the Whitby, Port Perry and Lindsay railroad in the week ending October 9th were as follows: Passengers, $694.75; freight, $2,169.73; mails and sundries, $63.20; total, $2,927.68, against $2,003.25 in the corresponding week last year, being an increase of $24.43. Total traffic in current year, $67,921.41, against $53,033.36 last year, being an increase of $14,891.05.

Glass Mill-Stones.

The outcome of this successful experiment, we learn from the *Pottery Gazette* was the invention, by the Messrs. Thorn, of the glass mill-stones now made by them, and used in Germany with much satisfaction. Respecting their special merits, we learn, on the same authority, that they grind more easily, and do not heat the flour as much, as is the case with the French burr-stone. In grinding grist they run perfectly cool.

In making these stones the glass is cast in blocks of suitable size and shape, joined with cement in the same way as the French burrs, dressed and furrow cut with picks and pointed hammers. It is suggested that the substitution of diamond dressing machines would give better results.

Without going into the technical points respecting the comparative merits of the old and new mill-stones, which are given at some length, but which would only be appreciated by practical millers, we note simply our contemporary's opinion that, in the event of the success of certain experiments now making on a larger and more important scale than any previous ones, "this discovery will be entitled to rank as one of the most valuable of recent years as regards the milling industry."

AN enterprising sign painter says he would pay liberally for the brush that the "signs of the times" are painted with.

MARINE AND FISHERIES.

Our Salmon Fisheries.

Professor H. Y. Hind has written a letter to the *Forest and Stream*, in which he adverts to the climate question in reference to the late appearance of salmon in our rivers this season, also to "biennial spawners," also to the habit of salmon seeking other rivers than their native streams for sanitary purposes, and to the developement of the hook on the male salmon in *his off spawning year only*. He writes to Mr. Mowat, overseer of Fisheries, and asks to be informed through the columns of the *Miramichi Advance* for reliable information about the catch of salmon in the Bay of Chaleurs "forty years ago." He further says:—I wish to know whether any record or tradition exists respecting the salmon catch in the years 1832; 1835; and 1836, 1841, 1842 and 1852. In fact the record of any particularly good, or any particularly poor year, will be thankfully received. I have prepared a notice of the salmon catch and character of the seasons in certain rivers in Scotland for about one hundred years, and I wish to ascertain whether the experience in New Brunswick bears out certain remarkable relations I have found to exist between extremes of heat and cold in the appearance of certain anadromous fish particularly the salmon.

I should be glad if Mr. Mowat would also state whether he has ever taken or seen large male salmon late in the season without the hook being developed largely on the lower jaw; also, whether he has ever seen or heard of large male salmon, having milt well developed, without the hook on the lower jaw. I should also like to ask him whether he has ever seen any nests of the salmon which he supposes were made in the spring of the year. I have seen such nests at the headwaters of the North West branch of the South West Miramichi. I saw them with transparent eggs in them on the 24th of July, 1864, when I was making the Geological Survey of the Province.

The *Advance* says:—Professor Hind is writing on the Fisheries with a view of having the subject better understood than it now is, not only by the people, but also by the Department at Ottawa, whose knowledge and modes are both susceptible of improvement.

Suicides among Russian Officers.

The number of cases of suicide among the Russian officers in Tashkend, in Asiatic Russian, is increasing to an alarming extent. According to official returns, no fewer than six officers perished by their own hands in one week. Cases of suicide are notoriously common in the Russian army generally, and especially among the troops quartered on the frontier stations. The pay of the Russian officers is small, his promotion is slow, play is everywhere the rule, and drunkenness is common. Except in St. Petersburg and Moscow, no inducement whatsoever is held out to officers to interest themselves in their profession; and even in the above-named towns originality of thought is so discouraged that no officer would venture to express an opinion on any military subject at variance with the views held at headquarters. So little is there to interest, occupy, or amuse, that only a Russian could support the existence led by the officers of the army in country quarters. But if life in a Russian provincial town is dull and colorless, in Taskhend it is a thousand times worse. Often no post arrives for a whole month; there are no amusements; and consequently the unfortunate officer is driven to spend his time in smoking, drinking, card playing, and low intrigues. The result of all this is that a Russian paper rarely appears without announcing the death of an officer who has committed suicide at that post.

THE enormous charges of the British pension list are attracting more than usual attention in the House of Commons. It is stated that in less than a century the descendants of Lord St. Vincent and Lord Rodney have received $1,000,000 each. For nearly two hundred years the heirs of the Duke of Schomberg have drawn a nice income from that grateful country. The Dukes of Marlborough enjoy a perpetual pension of $25,-000 a year. The Duke of Wellington was given $3,500,000 by Parliament to support the dignity of his dukedom, and a pension of $10,000 a year for two generations. These are among some of the larger grants. The smaller ones are numberless, and many of them the rewards of mere favouritism.

Question of Higher Education.

There are few subjects which, in our time, have been worn more thoroughly threadbare than that of education. Unless it be for the behoof of what has been aptly called the "everlasting rising generation," this matter might be allowed to rest. Accepted theories have not been so thoroughly worked as to warrant, one would think, the demand just yet for the trial of new ones—as a matter of fact, we know that there are a great many old-fashioned Conservative sort of folk who are disposed to let well-enough a'one,—and even where they see defects, to rather bear the ills they have than to fly to those they know not of. But this is scarcely the spirit of the age. "Progress" is the watchword of the time. Whether it be backward or forward, or up or down, there must be movement; better to go anywhere than to stand still, and—as the inevitable consequence is supposed to be—be run over. Higher education must not be an exception to this rule. In the general mobilization of everything else this must not, of all things, remain immobile.

Time was when the distinction between a liberal and a professional education was pretty clear. That sort of intellectual training which aimed simply at the full and harmonious development of the faculties of the student was never confounded with that which is specially designed to fit a man for earning his bread. Indeed, it was thought that the farther the "pot-boiling," or as the Germans call it, the "bread-and-butter" idea was kept from the mind of the student engaged in the pursuit of a liberal education, and the more thoroughly he was trained to love study for its own sake, and for the sake of the consciousness of freedom and strength which it imported, the better. Then it was no objection to Latin or Greek that, in all probability, the person learning them would make very little direct use of them after he left College; or to logic, metaphysics, and the higher mathematics, that he was not likely to adopt a profession which would call these branches of knowledge directly into requisition. Then, if the precocious and impatient youngster objected to the lessons which he was required to learn, that he did not see the use of them, it was deemed a sufficient answer that what he knew not then he would know in after years. And it must be admitted that, in this way, some excellent scholars were made, and—which is still more important—some excellent characters were formed.

But, it appears, a more excellent theory has been discovered, and all this is to be changed, or to give place to something better, Latin and Greek if they are not to be altogether discarded are at least to be relegated to the region of the options. Metaphysics is to give place to the physical sciences. In a word, what have heretofore been grouped under the general head of liberal studies, if they are to be retained at all, are to have a subordinate position assigned to them, and education is to be made, in the more materialistic and matter-of-fact sense of the terms, "practical and useful." In the process of effecting this change, an entirely new method of instruction is to be called into requisition. The "object-lesson" is to perform a conspicuous part. Not only are the academy and the Porch to be used as heretofore, but the "grove" and even places less congenial to the feelings of the student are to be brought into prominence as places of instruction. The editor of the *Popular Science Monthly* who is a leader in this reform, or rather, perhaps, this agitation for reform, suggests some measures which probably will appear to many to seem rather radical and even startling innovations. We may mention a few of these.

As a first instalment of what he would like to see introduced into our institutions of learning, he thinks great good both immediate and prospective would result if, for example, the college buildings of the Michigan University, at Ann Arbor, were treated as an object-lesson; and if after this was mastered, the water-supply and sewage system of the town were treated in the same way. After perfecting themselves in these preliminary lessons, he would have the students to systematically extend their studies to the schoolhouses, the poorhouse, and the gaol, with a view to understanding the scientific principles involved in their hygienic, and sanitary conditions and arrangements. Of course he would not have them to end there, but, as we may take for granted, extend their investigations to everything else, either immediately or remotely connected with human welfare. If an object-lesson should be made of the water supply, why not of the food supply? What people eat is quite as important as what they drink. To investigate, with sufficient thoroughness to be of any value to the student in after life, all the sources from which the commisariat of a single city is supplied, opens a pretty wide field, furnishing material for several object-lessons. Then, while man continues to be a clothes-wearing animal, and especially while he continues to be so largely dependent upon clothes, both for his respectability and comfort, there does not seem to be any good reason why the "science of clothes" should not receive its full share of attention.

It may be an evidence of weakness on our part, but we confess, the vastness of the curriculum suggested by Prof. Youmans, in the article referred to, rather appalls us. To say nothing of the mistaken notion of education, which, as we conceive, underlies the whole of this theory, if the mind is to be made a catch-all, which is to be crammed with all sorts of "practical" knowledge, which a gross materialistic utilitarianism may judge to be "useful," and if this be the proper work of schools and colleges, one can scarcely see where the school-days of the coming generation are to end. In fact, if the work is to be done thoroughly, it appears to stretch out, popularly speaking, almost to infinity. Besides, when one thinks of it, to say nothing of the grotesque situations which it suggests, the carrying out of this comprehensive course of instruction would, as it appears to us, be attended with considerable inconvenience.

Think of Dr. McCaul, with his noble staff of co-labourers, for example, leading a few hundred students in a subterranean exploration of the city of Toronto, in order to induct them into the scientific mysteries involved in the sewage system of our good city,—or taking them down for a month to Governor Green's Castle to form a scientific and practical acquaintance with its dietetic hygienic, sanitary, and disciplinary arrangements, and then to have every other institution existing among us subjected to the same process. We hope our educational authorities will make haste slowly in adopting so radical a programme.

Love's Young Dream.

One of the most romantic affairs ever before heard of in this section of the country, says a correspondent at Marion, Ind., first took place here about two weeks ago, and which terminated last night. The substance of the case is as follows: About three miles in the country lives a well-to-do farmer named Fauster, who has in his family a daughter named Sarah D., aged just 14, who is small in stature for her age, and is merely a child. Another old farmer named Pritchett is a close neighbour, who has a son just 13 years of age, who is dubbed as Morton. About two weeks ago these small children planned an elopement, and succeeded in leaving their paternal roof safely. After leaving their homes they walked to Wabash, a distance of twenty miles, where they took the train for White Pigeon, Mich. After arriving there they were united in marriage by the proper persons. The pair then roamed over several towns in the state on their wedding trip, until their finances became short, when they returned home last week and told their respective parents of their adventure. The father of the girl became indignant and brought the girl to the town last Saturday, before 'Squire Timothy, where a warrant was issued charging Morton Pritchett's father with abduction. The case was tried yesterday, when he was acquitted, the girl acknowledging she persuaded the youth to elope with her, and furnished part of the money, the cost of the whole trip being $10.25. While on the trip and after they were married neither occupied the same bed, and no change of clothing was taken along for the occasion. After the trial each returned to their respective homes, where they still remain. The father of the girl will immediately institute proceedings to have the marriage set aside, the plea to be that she was not old enough. The affair has caused considerable interest, and every one who is acquainted with the particulars has taken an interest in the case. During the trial several funny incidents were told by each, which the jammed court room relished with pleasure. The end is not yet, as bad blood is brewing between the two parents.

THE senior Greek professor, in his lecture to the juniors the other day, speaking of the marriage of Venus and Vulcan, remarked that "the handsomest women generally marry the homeliest men," adding grimly; "There's encouragement for a good many of you."

The Use and Abuse of Fiction.

What was said in a former article on the use and the abuse of the theatre, is equally true of the use and abuse of fiction. Indeed these are but different forms of the same thing. What dramatic representation is to the eye, works of fiction are to the imagination. Both are ideal representations of truth, and all that can be said either for or against the one may be said with equal truthfulness for or against the other. From a very early age, mankind have been in the habit of clothing their thoughts, and embodying the truths which they would impart to each other, in the form of fables, allegories, parables, and other forms of ideal representations. Indeed, in the early ages of the world, when books were few, or did not exist at all, the bulk of the wit and wisdom that had been preserved from the past, as well as that which was the product of contemporary genius, was wrapped up in such forms as these. The stories which were told at the fire-side; the songs that were sung, and the ballads and "Sages" which were recited on their festive occasions, were of this sort. Even philosophy and religion were taught in this way. And not a little of the most precious truth that we possess to-day has found its way to us in fictitious forms. Every one knows that the relics of the Hebrew prophets, which came down to our time, abound in these poetic creations. Even the Divine Teacher himself did not shrink from using the parable as an instrument of instruction, and as a means of preserving the truth in the memory of his hearers.

In view of these facts it is worse than useless to assail fiction as such.—Like every other sort of literature, beyond question much of it is bad, and of this we may take occasion to say something at another time. But in saying this, we are only affirming of fiction what may be affirmed, with equal truthfulness, of every other sort of writing. Even into the very best histories the fictitious element enters largely. And this is true of not a few of the biographies which are most widely circulated, and that have the largest number of readers. It is this element, supplied by the imagination of the author, which makes the events, and personages which a writer describes live in the mind of the reader; it is this which gives vividness and reality to a narrative which unenlivened by it would would be so hopelessly dull and stupid, that it would not only be drudgery to read it, but it would make no distinct or lasting impression on the mind of the reader. Take all that is imaginary, dramatic, and practical, from the writing of Macaulay and what would the residuum be worth? Why even the Sabbath-school libraries, furnished by the churches of Christendom, and read by children, are very largely stories which are purely the creations of the imagination. The reason of this is, as the caterers for these libraries tell us, that experience has convinced them, that this is the only sort of books that they can get the bulk of the children and young people to read.

We cannot say that we are altogether pleased with this. One of the abuses of fiction we judge to be the putting it in exciting forms, and in large quantities, into the hands of children or very young persons. There are other faculties which ought to be developed before the imagination. And where the habit is formed early of reading fiction to the exclusion of works which appeal more directly to the understanding and judgment, and call for the exercise of the memory, they induce a careless and hurried mode of reading, which permanently unfits the mind for the sober pursuit of knowledge. Besides, to many young persons, especially to girls of a nervous and excitable temperament, such reading begun early and pursued intemperately, as it is almost sure to be—unless prevented by outside restraint—by keeping the brain in an abnormal and unhealthy state of excitement at a time when quietness is a most essential condition of healthy development—leads to the most disastrous consequences, both physical and mental. Every intelligent physician of large practice, especially such as have made nervous and mental disease a special study, would bear testimony to the truth of this observation. Fiction is to the mind what sweetmeats, relishes and stimulants are to the palate,—taken in limited quantities, along with plainer and less exciting food, it may do good; adopted as a diet to live on, it can only work mischief. A literary friend, a hard student, being asked what he had been reading lately, replied, in our hearing, "I have spent the last few days reading novels. I like occasionally to spend a few days in this way; I find it has an effect upon the mind very much like that which a little good whiskey has upon the body." We have never forgotten the comparison, or the impression which it conveyed, that whatever advantage might be derived from this sort of reading, especially by nervous and excitable young people, was secured at the risk of some evil; and that it ought not to be indulged in therefore without careful limitation and self-restraint.

Some Turkish Intrigues.

Perhaps the most striking fact to a stranger is the little interest Turkish women seem to inspire among the gallant population of Constantinople. But such strangers are, perhaps, unaware of the danger of a word, or even a look; a prolonged gaze into the carriage of *grande dame Turque* may provoke the ire of an attendant eunuch, and cause him to lay about right and left the heavy whip with which he is often provided; but the greatest danger lies in the treacherous encouragement of the *grande dame* herself. Some years ago a M. B——, a young Frenchman of this town, became enamored of one of these veiled Junos, whose soft glance seemed to reveal a reciprocal passion. Day after day he awaited her carriage at a corner of the principal thoroughfare, and, day after day the bewiching eyes drew him carressingly to his doom. Still, no words were exchanged. M. B——became more and more infatuated, and in spite of the warnings of his friends he determined to carry on the intrigue to the end, whatever that might be. Patiently he bided his time and his opportunity, nor were they long in presenting themselves. He was rewarded one day by seeing a tiny jeweled hand drop a billet from the carriage window, which fluttered all unnoticed to his feet. Seizing the paper, the enraptured Frenchman hurriedly deciphered the few words therein inscribed. The lady proposed a meeting for that same evening in the obscure corner of a large cemetery. B——, who had patiently borne the quizzing of his friends, now informed them of the progress of his adventure. He was again warned against pursuing it further; but he laughed at the idea of danger, and, accompanied by a friend, repaired to the rendezvous at the appointed hour. He was presently accosted by a sable servant, exceedingly well dressed, who politely invited him to follow. The two friends turned into a deserted street and arrived at a small door which led through a covered yard to a second entrance. This their guide unlocked, and made a sign for M. B——'s friend to retire. All was silence and darkness around; the servant's black eyes seemed to gleam with malice; and, moved by an undefined fear, the friend again implored M. B——to return. "Bah!" returned this gentleman, "it's too late; besides, what is there to fear when things are managed so easily?" The door closed upon the audacious Frenchman, but the fears of his friends were prophetic—he was never seen by them again. Many attempts were made to learn his fate, and large bribes were freely given for this object. A hint was received that he had been conveyed beyond the frontier, but all traces of him were lost, and no further clue was ever obtained as to his disappearance. One or two such adventures are enough to damp the ardor of the boldest Lovelace, and, unfortunately, other examples have not been wanting.—*Temple Bar.*

REST is never so sweet as after a long struggle; strength is never so strong as through trial; joy is a more blessed thing after sorrow; and the fair dawning of sunny days could never come if we had no night.

A NORTH Carolina man planned to frighten his wife by a sham attempt at suicide. He was to very gently hang himself, and a friend was to cut him down; but the friend was not prompt, and the plotter was choked to death.

"Do you want to kill the child?" exclaimed a gentleman as he saw a boy tip the baby out of its carriage on the walk. "No, not quite," replied the boy; "but if I can get him to bawl loud enough, mother will take care of him while I go and wade in the ditch with Johnnie Bracer!"

DR. HASTINGS, of Boston, in speaking of religious joy, and of singing as being the natural expression of that joy, remarked that some congregations had so little of it that they had to hire people to do their singing. "Why," says he "I would as soon think of hiring a man to eat my breakfast."

Anecdotes of Sharks.

HOW THEY FOLLOWED A DYING SAILOR—A SEVENTY-FOOT FISH—A NARROW ESCAPE.

Some twenty-five years ago, when the writer was returning from China to England, a messmate of his, a young midshipman, hailing from Belfast, was taken ill of dysentry. The poor young fellow battled long with the fell disease, but though he possessed a vigorous constitution, and as brave a heart as any man I ever knew, he could not shake it off. During the last ten days of his illness it had been remarked that a huge shark followed the ship continuously; the ill-omened creature was first seen over the counter, on the same side of the ship where was the cabin in which young H——lay dying, and indeed just below it. Every one saw it; and officers and men had only to lean over the rail, and look long enough, and a dim, shadowy form could be seen moving stealthily deep down in the calm sea. Sometimes it disappeared for hours; and a hope was expressed that it had taken itself off. "But no," said one of the quartermasters, an ancient mariner, who had passed fifty years at sea, "the shark would not leave until it got what it had come for;" and the old salt jerked his head on one side to denote what he meant. The shark became the subject of daily discourse, both in the forecastle and on the quarter-deck, and its appearances were regularly chronicled. Sometimes it rose near the surface, and then it sank low down, and looked more horrible in the deep stillness of the unfathomable sea. All this time the weather remained very calm, and we had scarcely any wind, though at night it sometimes freshened, only to die away in the morning.

At length H——died, after much suffering and a brave struggle against a hard fate. Within a few hours of his death this fine young fellow was buried with all the tokens of respect we could command.

That morning the shark was seen at his accustomed place under the counter, but after the funeral he was seen no more, and no one on board the ship, either forward or aft, could after this gainsay the observation of the old quartermaster: "I 'told you sir, he knew there was a dying man aboard us. Yon'll see no more of him; he's got what he wanted."

Entertaining this view it is not surprising that sailors regard the capture of a shark as an act of retributive justice; for even though the victim that has fallen into their hands may not have feasted on a live or dead seaman—which is extremely unlikely, as they never miss a chance of devouring human flesh—yet they look upon him as the representative of his race, and "serve him out" accordingly.

For several days some sharks had followed a ship off the Brazil coast, and, notwithstanding every effort the crew could not succeed in catching one. At length a shark suddenly made a snatch at the bait, and was soon plunging and lashing his tail in a most furious manner, as he found that he had got more than he bargained for. It was evident that he had taken the hook, and was so far secured, but still he was but half caught, as soon appeared. The men on deck "clapped on" to the line and very soon the creature was alongside, but he plunged and lashed about so furiously that it was found impossible to land him on the deck until he had somewhat exhausted his immense strength. To assist in effecting this the mate proposed to harpoon him, and in the absence of a proper instrument took the boat-hook, to which he attached a line. After a few attempts the mate succeeded in plunging the boat-hook in the fore part of the back, when the shark by a prodigious effort succeeded in snapping the line, and, freeing himself from the hook, made off with the boat-hook sticking like a flagstaff out of his back. He remained in sight some little time, evidently feeling very uneasy, and then disappeared; but whether he succeeded in disengaging himself from this unwonted appendage could not be ascertained.

The shark is so voracious that in pursuing its prey it will leap out of the water, and it also feeds on its own species. It has been said that on cutting open sharks smaller ones have been found inside; for this I cannot vouch from personal observation, though I have seen a very miscellaneous collection of articles extracted from the stomach, such as towels, tooth-brushes, shoes, half a newspapers and a rope's end. The shark will devour anything, and may be regarded as the scavenger of the sea, thus performing the same office as the vultures on land.

The shark produces its young from a sort of egg, the shell of which is brown, and resembles leather; the egg is of oblong shape, with tendrils curling from its corners. When the term of hatching is fulfilled, the end of the case is pushed out by the young shark, which measures seven or eight inches in length. The flesh is seldom eaten, even by sailors whose fare for months has been salt meat; the flavour is unpalatable, and the texture tough and fibrous. The Icelanders use the fat, which can be kept for a long time, in place of lard, and eat it with the prepared fish. The liver affords a good deal of oil, and in Greenland the skin is used for the construction of canoes. Shark's teeth are frequently dug up in fossil remains, and specimens have been found of which the enamelled portion was four and a half inches in length, from whence a geologist has calculated that the shark which owned this tooth must have exceeded seventy feet in length.

In the year 1831 an American ship, named the *Olympus*, anchored off the island of Bourbon, in the Indian Ocean, and some of the sailors obtained permission to go ashore and enjoy a walk after the day's work. Night was coming on, and the quartermaster on duty, tempted to indulge in a bath by the tranquillity of the scene and the delicious coolness of the water, undressed and jumped overboard from the gangway. The quartermaster was a good swimmer, and was soon some distance from the ship, oblivious of danger. But the cook, a negro, who was sitting in the main-chains cooling himself after his hot day's duty, chanced to espy the fin of a shark which was swimming near the surface of the water on the other side of the ship to that on which his shipmate was disporting himself. His first impulse, after making sure what it was (for so large was the size he thought it must be a plank), was to call out and warn him of his danger, but it seemed he wisely determined not to do so lest the news might paralyze him with terror. So he quickly warned some of the sailors, and in little more than two minutes a small dingy suspended at the davits was lowered into the water, and the crew were pulling with might and main toward their comrade, Whether it was that only now the shark caught sight of the man in the water, or the noise of the boat attracted his attention in that direction, the huge fish turned and made toward the quartermaster, who, still unconscious of the fearful danger menacing him, continued to swim away with redoubled energy, as the quick click of the rowlocks warned him of the approach of his shipmates. Reticence would now have been misplaced, as, unless he was rescued within a few seconds, all would be over with him.

"Williams," shouted out the cockswain, "there are sharks near you; be quick—get into the boat, as you value your life."

Apprehending at length the full horror of his position, the quartermaster turned to the little boat, where alone was safety, and being a powerful swimmer, was soon almost alongside. But the shark was upon him. "Quick! quick!" shouted his shipmates, while the bowman, glancing over his shoulder, threw in his oar, and, quick as thought, jumped up, boat-hook in hand, to try and help the struggling seaman.

"Way enough," shouted the coxswain, as the boat, impelled by stout arms, shot shot almost over the quartermaster, who, after a final effort, extended his arms to seize the gunwale of the boat, while two of the crew leaned over the side in order to help him out. But the shark was not to be thus easily balked of its anticipated prey, and as it was near enough to make its venture, darted half out of the water, exposing its prodigious length, and turned over on its side, opening its cavernous jaws. At that moment, when all appeared lost, the bowman, exerting all his strength (and it so happened that he was the most powerful man in the ship), plunged the boat-hook right into the mouth of the animal, which writhing in agony, fell back into the water, and snapped the weapon in two. Turning upon the boat in its fury, it lashed it with its tail with such terrible force that it staved it forward. The sailors had just time to draw in their shipmate, when they they became aware of the new danger menacing all of them. The boat began to fill, when deliverance came from another quarter. Their cries for help (which, owing to the calmness of the evening, were audible a great distance) attracted the attention of the crew of a schooner anchored near the land, who quickly launched their long-boat, and made toward them.

The shark, lashing the water with fury and pain, appeared determined to exact revenge, and remained near the spot, awaiting its prey; but it was again balked, for just as the little dingey was settling fast by the head, the friendly long-boat arrived upon the scene. The crew, with Williams, were taken out of the sinking craft, and were soon on their way back to the ship, rejoicing their escape from a terrible death.

Greek Symbolism.

The decay of pagan belief was not, as Hegel imagines, due to the fact that Hellenic art was anthropomorphic. The gods ceased to be gods not merely because they became too like men, but because they became too like anything definite. If the ibis on the amulet or the owl on the terra cotta represents a more vital belief in the gods than does the Venus of Milo or the Giustiniani Minerva, it is not because the idea of divinity is more compatible with an ugly bird than with a beautiful woman, but because whereas the beautiful woman, exquisitely wrought by a consumate sculptor, occupied the mind of the artist and of the beholder with the idea of her beauty, to the exclusion of all else, the rudely-engraven ibis or the badly-modeled owlet, on the other hand, served merely as a symbol, as the recaller of an idea; the mind did not pause in contemplation of the bird, but wandered off in search of the god; the goggle eyes of the owl and the beak of the ibis were soon forgotten in the contamplation of the vague, ever-transmuted visions of phenomena of sky and light, of semi-human and semi-bestial shapes, of confused, half-embodied forces; in short, of the supernatural. But the human shape did most mischief to the supernatural merely because the human shape was the most absolute, the most distinct of all shapes; a god might be symbolized as a beast, but he could only be portrayed as a man; and if the portrait was correct, then the god was a man, and nothing more. Even the most fantastic among pagan supernatural creatures, those strange monsters who longest kept their original dual nature—the centaurs, satyrs, and tritons—became beneath the chisel of the artist mere abberations from the normal, rare and curious types like certain fairbooth phenomena, but perfectly intelligible and rational; the very Chimæra, she who was to give her name to every sort of unintelligible fancy, became, in the bas-reliefs of the story of Bellerophon, a mere singular mixture between a lion and a dog, and a bird—a cross-breed which happens not to be possible, but which an ancient might well have conceived as adorning some distant zoological collection. How much more rationalized were not the divinities in whom only a peculiar shape of the eye, a certain structure of the leg, or a definite fashion of wearing the hair, remained of their former nature? Learned men, indeed, tell us that we need only to glance at Hera to see that she it at bottom a cow; at Apollo, to recognize that he is but a stag in human shape; or at Zeus, to recognize that he is, in point of fact, a lion. Yet it remains true that we need only walk down the nearest street to meet 10 ordinary men and women who look more like various animals than do any antique divinities, and who can yet never be said to be in really cows, stags, or lions. The same applies to the violent efforts which are constantly being made to show in the Greek and Latin poets a distinct recollection of the cosmic nature of the gods, constructing the very human movements, looks, and dress of the divinities into meteorological phenomena, as has been done even by Mr. Ruskin in his "Queen of the Air," despite his artist's sense, which should have warned him that no artistic figure, like Homer's divinities, can possibly be at the same time a woman and a whirlwind.

She Snubbed Them.

A plainly dressed little lady from San Francisco recently appeared at a California watering place and was snubbed by all the ladies. She sent home for her best dresses and all her diamonds. After her trunks arrived she went to breakfast in a magnificent morning dress made by Worth, profusely ornamented with diamonds, and her two little children were dressed in the height of fashion. Everybody seemed anxious to make amends for past slights, but she was extremely distant to one and all. She cut them in this way for a week, then packed up her nine Saratoga trunks and sent them home, and resumed her plain and comfortable vacation clothes.

A BOY was carrying two pounds of powder and a fuse in a cigar box, at Gibraltar, Pa. The end of the fuse protruded, and a practical joker was at hand to light it. The explosion killed the boy.

SCIENTIFIC GOSSIP.

ONE kind of paper is made in China from the paper mulberry tree bark, and another kind from a mixture of that bark and wheat straw.

THE Syoran and Orenberg Railway bridge across the River Volga, Russia, which is just finished, cost $6,000,000. Where the bridge is built the river is more than a mile wide. The 14 piers which support the girders are 100 feet above the main level of the water, and the girders are 364 feet long and 20 feet wide.

THE date of the earliest eclipse of the sun recorded in the annals of the Chinese, when "on the first day of the last month of Autumn the sun and moon did not meet harmoniously in Fang," or in that part of the heavens defined by two stars in the constellation of the Scorpion, has been determined by Prof. Von Oppolzer, of Vienna, to have been the morning of Oct. 22, 2137 B.C.

M. LORTEL has called the attention of the French Academy of Sciences to a heretofore unnoticed, but an apparently very ancient, station of the stone age. It is situated near Hanaweh, a place not far from Tyre in Syria. A very large number of rudely formed flints, as well as a great many fragments of bone and teeth, are there found in a kind of conglomerate or osseous-breccia.

THE wool crop of the world has increased five times since 1830, when it was about 320,000,000 pounds in weight. In 1878—the latest year for which there are complete figures—Europe produced 740,000,000, River Plate 240,000,000, United States 208,000,000, Australia 350,000,000 and South Africa 48,000,000 pounds, making a total of 1,586,000,000 pounds. Great Britain and France consume each about the same quantity of wool—380,000,000 a year. Germany consumes about 165,000,000 pounds; United States, 250,000,000 pounds, and Russia, Austria, and other countries, 400,000,000 pounds.

THERE are, or have lately been, on exhibition in Glasgow, Scotland, samples of leather prepared with chrome, and without the use of any tanning whatever. It is claimed that the chrome process, invented and patented by a Dr. Heinzerling, is not only cheaper and more expeditious than the usual methods of tanning, but that it produces a leather "stronger, more durable, more pliant, and less pervious to moisture." The chrome-tanned leather exhibited was made into belting, harness, boots, and other articles; and it may be well to suggest that our leather manufacturers should scrutinize what may be learned regarding the results, and if the report is favourable it will go hard with our inventors, but they will better the improvement.

An Edison Romance.

Mr. Edison as the hero of a romance now publishing in a Paris paper, is shown sitting in the workshop at his elegant mansion, wrapped in a black velvet dressing gown with tassels of violet silk. Resting beside him on a velvet cushion is the left hand and arm, just severed from her body, of a beautiful young woman; and near him a powerful electric battery. On the delicate wrist of the young woman's arm is a gold enamel viper, and on her finger a sapphire ring, the hand holding a dainty pearl gray glove. As the story is entitled "The New Eve," it is supposed that Edison is about to create a woman with the arm instead of a rib as a "starter." One of the incidents represents Edison sitting on a bank smoking a choice cigar and watching two trains armed with a new brake of his, designed to stop them instantaneously and without a shock. The engineers becoming excited bungle at the brakes, bringing about a collision in which several hundred are killed. At this, the gifted inventor, throwing away his cigar, impatiently remarks, "Clumsy! stupid!" It is plain that very little is really known about Edison in this country.

A Disappointed Debtor.

The train had started off. A young man rushed breathless in. "Got left, did you?" "Well, ain't I here?" he responded. Then one said he could go across the bridge and catch it, and another told him when the next train would go, and made various suggestions. The chap looked at the disappearing train a few seconds, when somebody asked, "Where were you going?" Then the wicked fellow said, "Oh, I wasn't going in it, but there was a fellow in the train to whom I promised to pay a bill."

The Solid South.

It is said that there is a skeleton in every house. The idea is that there is something in the history of every family that it keeps as carefully concealed as possible, and which it would like to have forgotten. There are such things in nations, as well as in families. The thing that most patriotic Americans would like to have concealed and forgotten, is the thing indicated by the word which stands at the head of this article. That "solid south" is the most ugly fact in the current history of the great American Republic The import of that fact, being interpreted, is, that the unity of the nation is essentially a thing of the past. The South cares no more for the Democrats than it does for the Republicans; it most cordially hates and despises both the one and the other of these. It gives its influence in favour of the former in preference to the latter, simply because such an alliance is the only means by which it can secure its ascendency in the nation, and be once more in a position to redress what it believes to be its wrongs, and to revenge itself upon the hated Yankee. No person can travel in the South without perceiving that a feeling of bitterness against the North, deep and intense, everywhere prevails; and that feeling will never be appeased until all that was done by the war is undone by legislation.

Tho "solid South" means, too, the systematic suppression of the negro vote. Everybody knows, that knows anything about the feeling which prevails among this class of American citizens, that however much they may respect their old masters and their families, they do not trust them. They know too well how deep rooted and strong this aversion is to the very idea of negro equality with them in anything! especially at the polls and before the courts; and they have sagacity enough to perceive that if the white people of the south cannot reduce them again to bondage, they will do all in their power to make their liberty as little worth to them as possible. They know, too, that the party at the north that did all that they could do to fasten their bonds upon them forever, will in the event of its getting into power, do anything that the south may ask them to do, to reduce them again to virtual, if not actual slavery. The negroes know all this, and would not, therefore, if left to themselves to vote as they pleased, cast one vote in a thousand for the Democratic party. In many parts of the south these coloured voters are largely in the ascendency so far as numbers are concerned; and in spite of this fact the the south will remain solid. This fact speaks for itself; comment is unnecessary.

It follows then that democratic government—the term is used in its proper grammatical, not in its party sense—is a failure, at least so far as the south is concerned. The "solid South" proves beyond a doubt that the government is not to be carried on in accordance with the will of the whole people, but according to a part, and that so far as numbers are concerned, the smallest part. It may, indeed, be said that this is as it should be; that the negroes are not fit for self-government; and that the will of the superior class, the class that owns the greater part of the property, and represents the greater part of the intelligence, are the people that should govern. Into the discussion of that question we enter not. Everyone, however, will see that if there be any force in this argument, it is against the form of goverment which exists in the United States, and only tends to strengthen our position. Besides, all that is said of the ignorance and incapacity for self-government of the negroes is equally true of a large proportion of the enormous foreign element, especially in the great cities of the north. There is no argument that can be validly employed in favour of the suppression of the negro vote in the south that would not be equally valid in favour of the disfranchisement of an immense number of voters at the north.

We do not wonder, in view of these facts, that the American people do not like to have so much said about the "solid South." The northern Democrat, for reasons made sufficiently apparent in this article, is ashamed of it, and would rather, if he could, get on without it; and the Republican feels maddened by the fact that the very means which he has devised as a makeweight against the South, is not only neutralized, but turned against him.

THE time that a boy begins to think his mother doesn't know enough to select his clothing for him is a dangerous period in his history.

A Millionaire Criminal.

(London Telegraph.)

Not every criminal who incurs the banishment to Siberia is on that account to be compassionated, if we may believe the accounts of Mr. Juchanzeff's sojourn in exile, recently published by a St. Petersburg journal. This eminent malefactor, known throughout Russia by the significant soubriquet of "The Stealer of Millions," has contrived to retain possession of the enormous fortune he acquired by high-class swindling. When condemned to deportation, he travelled to Krasnojarsk, the town selected for his penal residence by the imperial authorities, in princely style, attended by a suite of servants, carriages and horses, and it would appear that he is to become the leader of fashion in that Siberian city. Tailors, perfumers and tobacconists advertise their wares under his name; he has been elected a member of the leading club, and is about to contract an alliance with a young lady belonging to one of the first families of Krasnojarsk. His dinner parties are attended by the chief official personages and local nobilities; ladies of the best society flock to his evening receptions, and accept the splendid presents with which he judiciously courts their favour and social countenance. It is proposed by a committee of Krasnojarsk "*lionnes*" to present him, upon his wedding day, with a wreath of laurel, oak leaves, and roses. Altogether, for a convicted misdemeanant, undergoing sentence of banishment, he appears to be leading an uncommonly pleasant life. Not so the thousands of his dupes who, having trusted their fortunes to his keeping, suffered total ruin at hishands.

IF you can say nothing good of any one, say nothing at all, for in friendship as in love we are often happier in our ignorance than in our knowledge.

MARKET REPORTS.

CANADIAN LUMBERMAN OFFICE.

Toronto, 14th Oct., 1880.

The stock of lumber on hand in this city at present is low, on account of the recent strike on the Northern Railway. The demand for cars for exports and local traffic, far exceeds the supply. As the season of navigation draws to a close, dealers are anxious to get their lumber away, fearing that rates will rise, which at present may be quoted at $1.25 to $1.50 to Oswego. The latest reports from Oswego indicate that a large stock is on hand there. Sales for the past month have been slow, but the feeling is that prices will improve as the season draws to a close, and sales will be more brisk. The shingle market, both in Oswego and Canada, is lively—the demand exceeding the supply. A number of mills have shut down, as their stock has been cut up. From present appearances, a larger stock will be got out, during the coming winter—the men have gone to the woods earlier, and in greater numbers than usual. A brisk trade all over Western Canada, is anticipated this season. All the railroads are running at their full capacity.

YARD RATES.

Mill culls,	$ 5 50	@	7 00
Shipping culls, (in box,)	8 50	@	10 00
Dressing inch,	11 50	@	13 00
Flooring, ¼ & ½ in,	12 00	@	13 00
Joisting and scantling,	9 50	@	10 50
Mill run sidings	12 00	@	14 00
Pickings	17 00	@	20 00
Clear and pickings	25 00	@	28 00
Lath	1 25	@	1 40
Shingles, No. 1	2 10	@	2 20
No. 2	1 40	@	1 60

LONDON, ONT.

Common Lumber	$10 00	@	12 00
Stock boards	13 00	@	15 00
Clear in. and 1½ to 2 in.	25 00	@	30 00
Bill stuff, up to 15 feet		@	13 00
over 16	13 00	@	15 00
Lath, per 1000 feet		@	4 00
Shingles No, 2, per M.		@	2 65
per square		@	1 90

Our correspondent says, manufacturers of bill stuff from Georgian Bay and Lake Shore, met in London on the 7th inst, and decided to raise prices, $1 per M.

OTTAWA.

The following are quotations in the Ottawa market :—

12 in. stocks, good	$18 00	@	20 00
12 " S. culls	10 00	@	10 50
10 " good	16 00	@	18 00
10 " S. culls	9 50	@	10 50
Strips, good	17 00	@	20 00
" culls	6 50	@	7 50
Sidings, 1¼, 1½, and 2 in., good	23 90	@	26 00
" " culls	9 00	@	10 00
Lath (₱ 1,000 pcs.)	0 00	@	1 00
Deals (₱ Quebec standard) 1st	0 00	@	110 00
Deals (₱ Quebec standard) 2nd	0 00	@	65 00
Deals (₱ Quebec standard) 3rd	0 00	@	8 50
Cull deals (₱ M. ft.)	6 50	@	8 59

FREIGHT.

To Montreal, $1.15; Quebec, $2; Burlington, $2; Whitehall, $1.25; Albany, $3.50; New York, $4.

BUFFALO.

We quote cargo lots :

Uppers	$35 00	@	40 00
Common	16 00	@	19 00
Culls	11 00	@	12 00
Assorted lumber in car lots or boat loads :			
3 uppers 1 inch	$	@	40 00
Do. 1¼ and 1½ in	40 00	@	42 00
Do. 2 in	45 00	@	47 00
Do. 2½ 3 and 4 in. special			
Pickings 1 inch	28 00	@	30 00
" 1¼ and 1½ in	33 00	@	35 00
" 2, 3, and 4 in, special	22 00	@	40 00
Shelving	22 00	@	40 00
Cutting up	22 00	@	24 00
Sidings, com., 1 in	16 50	@	17 00
" 1¼ in. and over	17 00	@	20 09
Common, stocks	16 50	@	17 00
Box, all thicknesses	13 00	@	14 00
18 in XXX shingles	3 40	@	3 50
18 inch clear butts	2 40	@	2 50
Lath	1 75	@	1 80

We quote wholesale prices of hardwood lumber, delivered on cars or boat :

Walnut ¼ inch clear	$65 00
⅝ inch, 1sts and 2nds	70 00
¾ inch, 1sts and 2nds, 14 feet coffin stock	73 00
1 inch 1sts and 2nds	73 00
1¼, 1½, 1⅝, and 2 inch	74 00
2½ inch and thicker	75 00
counters	130 00
newels 7x5 to 10x10	90 00
common in. & thicker	50 00
culls, inch	35 00
culls, 1¼ inch	35 00
White ash, Ohio 1st and fine 2nds	28 00
Whitewood, inch	30 00
⅝ inch	28 00
¾ in coffin stock, 14 ft	30 00
square, 4x4 to 10x10	33 00
Chestnuts, 1sts and fine 2nds,	30 00
Maple	25 00
White oak, Ohio	30 00
Cherry, inch and thicker	42 00
Butternut	45 00
Hickory, best Ohio	35 00

CHICAGO.

YARD RATES.

First and second clear, 1@ 1¼ in	$43 00
First and 2d clear, 2 in	45 00
Third clear, 1¼ @ 2 in	38 00
Third clear, 1 inch	35 00
1st and 2d clear dressed siding	20 00
1st com. dressed siding	18 50
Second common	17 50
Flooring, 1st com. dressed	34 00
Flooring, 2d com. dressed	32 00
Flooring, 3d com. dressed	24 00
Box bds, A, 13 in. and up	43 00
Box bds, B, 14 in. and up	37 00
Box boards, C	25 00
A stock boards, 12 @ 16 in., rough	37 00
B stock bds, 10 @ 12 in	33 00
C stock bds, 10 @ 12 in	27 00
Common stock boards	17 00
Cull boards	$10 00 @ 11 00
Fencing, No. 1	12 50
Fencing, No. 2	10 50
Common boards	14 00 @ 15 00
Dimension stuff	12 40
Dimension stuff, 20 @ 30 ft	12 50 @ 20 00
Small timber, 6 x 6 to 8 x 8	11 50
Round posts, cedar	15 00
Pickets, dressed and headed, flat	20 00
Pickets, do., square	20 00
Pickets, rough,	14 00
Clear shingles	3 00
Extra "A" shingles	2 65
Standard "A" dry shingles	2 40
Shaded "A" shingles	1 10
No. 1 shingles	1 00
Cedar shingles	2 25
Lath, dry	2 25

OSWEGO, N. Y.

Three uppers	$38 00	@	40 00
Pickings	28 00	@	30 00
Pine, common	26 00	@	22 00
Common	14 00	@	16 00
Culls	12 00	@	14 00
Mill run lots	16 00	@	20 00
Sidings, selected, 1 inch	28 00	@	32 00
1¼ inch	28 00	@	35 00
Mill run, 1x10, 13 to 16 feet	16 00	@	20 00
Selected	20 00	@	25 00
shippers	15 00	@	16 00
Mill run, 1 and 1¼ in. strips	15 00	@	18 00
Culls, selected	20 00	@	24 00
1x6 selected, for clapboards	24 00	@	35 00
Shingles, XXX, 18-in. pine	3 00	@	3 50
XXX, 18-in. cedar	3 00	@	3 10
Lath	1 50	@	1 75

DETROIT.

Yard rates, Oct. 9, were as follows :

Uppers, all thicknesses	$40 00	@	45 09
Selects	35 00	@	38 00
Fine common, thick		@	30 00
No. 1 common stock, 1x12	16 00	@	18 00
Common shippers, 1x12	13 00	@	14 00
Flooring, select		@	25 00
common		@	22 00
Roofing, matched		@	16 00
Siding, clear		@	24 00
A select		@	20 00
B common		@	16 00
Ceiling, select		@	30 00
common		@	25 00
Shipping culls		@	12 00
Mill cull boards		@	10 00
Dimension or bill stuff to 16 feet		@	14 00
18 to 24 feet		@	15 00
longer than 24 feet	16 00	@	20 00
Shingles, clear, 18 inch		@	3 75
6 inch clear, 18 inch		@	2 75
Lath		@	2 25

ALBANY.

FREIGHTS.

To New York ₱ M. feet	$ 1 00
To Bridgeport	1 25
To New Haven	1 25
To Providence	2 00
To Pawtucket	2 25
To Norwalk	1 25
To Hartford	2 00
To Middletown	1 75
To New London	1 75
To Philadelphia	2 00

Quotations at the yards are as follows :

Pine, clear, ₱ M.	48@60
Pine, fourths	43@55
Pine, selects	38@45
Pine, good box	17@28
Pine, common box	14@17
Pine, 10 in. plank, each	38@42
Pine, 10-in. plank, culls	21@23
Pine boards, 10-in	25@28
Pine, 10-in boards, culls, each	17@18
Pine, 10-in. boards, 16 ft. ₱ M	28 00
Pine, 12-in. boards, 16 ft	28 00
Pine 12-in. boards, 13 ft	28 00
Pine, 1¼-in., siding, select	42 00
Pine, 1¼-in. siding common	18 00
Pine, 1-in. siding, selected,	40 00
Pine, 1-in. siding, common	16 00
Spruce boards, each	16
Spruce, plank, 1½-in., each	20
Spruce, plank, 2 in., each	30
Spruce, wall strips, each	11@11½
Hemlock, boards, each	13
Hemlock, joist, 4x6, each	30
Hemlock, wall strips, 2x4	9½
Black walnut, good, ₱ M	85 00
Black walnut, ⅝-in	78 00
Black walnut, ¾-in	78 00
Sycamore, 1-in	28 00
Sycamore, ⅝-in	22 00
White wood, 1 inch and thicker	40 00
White wood, ⅝ inch	30 00
Ash, good	43 00
Ash, second quality	30 00
Cherry, good	60 00
Cherry, common	35 00
Oak, good	42 00
Oak, second quality	25 00
Basswood	25 00
Hickory	40 00
Maple, Canada	30 00
Maple, American	28 00
Chestnut	40 00
Shingles, shaved, pine	6 00
" " 2d quality	4 50
Shingles, extra, sawed, pine	4 25
Shingles, clear, sawed, pine	3 25
Shingles, cedar, mixed	2 75
Shingles, hemlock	2 00
Lath, hemlock	1 50
Lath, spruce	2 00

CLEVELAND.

ROUGH LUMBER.

Uppers, thick	$45 00
inch	42 00
Box, thick	36 00
inch	32 00
2½, 3 and 4 in clears special	
Flooring strips, 6 in, No. 1	34 00
2	24 00
Fencing strips, 6-in, No. 1	16 00
No. 2	14 00
Select common, thick	28 00
inch	24 00
Common	15 00
Culls	12 00
B. bds No. 1 12 in	25 00
No 2	16 00
No	14 00
No 1 18 ft	20 00
No 2 18 ft	18 00
No. 3 18 ft	15 00
Bill stuff to 18 ft	13 00
Bill stuff over 18 ft. adds 75c to $1 per ft. per M.	
Shingles, XXX	3 60
clear butts	2 60
Lath	2 25
Surfacing one side adds to the price of rough lumber	1 00
2 sides	1 00
Norway bds and strips	18 00
common	13

DRESSED LUMBER.

Flooring and drop siding clear	$40 00
box	30 00
select com	28 00
commom	20 00
Siding, ½ in. bevel clear	00
box	20 00
select common	15 00

Working lumber matching flooring and drop siding, $2; working ½ in. siding, $4.

PETROLEUM.

From Petrolia, this week, the crude oil market is reported firm at $2.05 in tank. Refined is quoted at 25 cents in car load lots, with prospects of increase in value. The refineries are running to their utmost capacity to supply the demand. Holders of crude are confident of further appreciation in the value of their product and are holding fast to their stocks. Drillers are at a loss to fill the contracts rushed upon them by the late boom in prices. It has been estimated that during the nine months ending Oct. 1st, there were drilled in the district 325 wells, of which 67 were dry holes.

An Ottawa gentleman has in his possession a fine specimen of silver ore, found about forty miles from that city. He intends shortly taking steps to open up the mine.

FOR SALE, IN THE BEAUTIFUL town of Orillia, a very commodious brick house with out buildings and garden. Terms moderate. Apply to Editor of LUMBERMAN, Toronto.

MACKENZIE BROTHERS,

Brokers, and general Produce-Provision Commission Merchants, 24 Water Street, Saint John, N. B. Highest References provided. Consignments solicited. Correspondence respectfully requested. Returns promptly made.

W. R. MACKENZIE. D. G. MACKENZIE.

DOMINION HOUSE.

BRACEBRIDGE.

A good house in every respect. Free 'bus to and from the wharf. Terms, $1 per day.

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ORILLIA.

New and Commodious Brick Building; best north of Toronto; splendid sample rooms: centrally located; free 'bus.

JOHN KELLY, Proprietor.

ST. LAWRENCE HALL.

PORT HOPE.

Is noted for its superior home-like comforts—a well kept table, equalling the best Hotels in Toronto, and large, well-furnished rooms. Good sample rooms on ground floor. Walton Street, Port Hope.

Wm. MACKIE, Proprietor.

ALLANDALE JUNCTION HOTEL.

Travellers by Northern Railway have 15 to 20 minutes by all trains, for refreshments. Solid meals. Tea and coffee at counter. Fine brands of liquors and choice cigars.

E. S. MEEKING Proprietor

QUEEN'S HOTEL.

BRACEBRIDGE.

JOHN HIGGINS, Proprietor. The proprietor (late of Georgetown,) having lately taken possession of the above hotel, will endeavor to make it one of the best houses in the District of Muskoka. Tourists and hunting parties will receive every possible attention. Free 'bus to and from the steamboat wharf. Terms, one dollar per day.

FRASER'S HOTEL.

GRAVENHURST, ONT.

HENRY FRASER, proprietor (successor to Dougland Brown.) Mr. Fraser having purchased and thoroughly renovated and refitted that old established hotel, so long and popularly kept and owned by Dougald Brown, in the village of Gravenhurst, is now in a position to attend to the wants of the travelling and general public. Parties *en route* to the Muskoka District, will find "Fraser's" a comfortable stopping place. The Bar and Larder are well furnished. Convenient Sample Rooms for Commercial Men. Good Stabling and attentive hostler. Free 'bus to and from trains and steamboats.

ST. LOUIS HOTEL.

THE RUSSELL HOTEL CO., Proprietors.

WILLIS RUSSELL, Pres., Quebec.

This hotel, which is unrivalled for size, style and locality in Quebec, is open throughout the year for pleasure and business travel.

HOTEL OTTAWA,

No. 21 North Side King Square.

ST. JOHN, N. B.

E. COSMAN, - - Proprietor.

Terms, $1.00 to $1.50 per day.

THE RUSSELL HOUSE,

OTTAWA,

JAS. A. GOUIN, - - Proprietor.

IS THE

Favourite Resort of the Leading Public men of the Dominion attending the annual Sessions of Parliament.

Ministers of the Crown, Senators, Members of Parliament, Public Officials, as well as those having business with the various Departments of the Government. It is also the head-quarters of those having dealings with the princely Lumber Manufacturers in the great Pine Valley, of which Ottawa is the acknowledged centre.

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IN PRESS—TO BE PUBLISHED IN JANUARY, 1881.

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Containing the latest and most authentic descriptions of over 7,500 Cities, Towns and Villages in the Provinces of Ontario, Quebec, Nova Scotia, New Brunswick, Newfoundland, Prince Edward Island, Manitoba, British Columbia and the North-West Territories, and other general information, drawn from official sources, as to the names, locality, extent, ect., of over 1,800 Lakes and Rivers; a TABLE OF ROUTES, showing the proximity of the Railroad Stations, and Sea Lake and River Ports, to the Cities, Towns, Villages, etc., in the severa. Provinces, (this Table will be found invaluable); and a neat Coloured Map of the Dominion of Canada. Edited by P. A. Crossby, assisted by a corps of Writers. Subscribers' names respectfully solicited. Agents wanted. ☞ PRICE $3—Payable on Delivery.

JOHN LOVELL & SON, Publishers.

Montreal, August, 1880.

DISSOLUTION OF PARTNERSHIP.

THE PARTNERSHIP HEREOFORE existing between GEO. BENGOUGH and WM. DINGMAN, as Machinery Brokers, has this day been dissolved by mutual consent. All accounts will be suited, and the business carried on by Geo. Bengough under the name and style of Wm. Dingman & Co.

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ON THE

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DISTRICT OF ALGOMA,

belonging to his estate, together with the steam saw mills and other property necessary for a large lumber business.

The timber licenses to be sold consist of part of the township of Sprague, on the Serpent River, and the townships of Salter, May, Hallam, Merrit, Baldwin and Shakespeare, on the Spanish River. These limits are well watered by the Spanish River, which can be driven at all seasons in from three to fourteen days. Supplies can be distributed from the river, which is navigable for 35 miles from the mouth. The quality of pine is well known as being very choice.

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Farm, 1,200 acres, on river, 140 cleared and a meadow, two large barns and implements for farming, The above property will be sold *en bloc*. A party is at Spanish River Mills to show the limit to intending purchasers.

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PUBLIC NOTICE.

ALL PERSONS NOW SQUATTED upon any Public Lands within the Nipissing Crown Land Agency are hereby requested to apply without delay to John S. Scarlett, Esquire, Crown Land Agent at Nipissing, and have their locations carried out in due form, failing which their claims cannot be recognized by the Department.

THOS. H. JOHNSON,
Assistant Commissioner.

Department of Crown Lands,
Toronto, 13th Oct., 1880.

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AND

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The following timber limits held by the Montreal Lumber Company, in the Province of Quebec, are hereby offered for sale, viz:

1. Limits on and near the River Maskinonge, as follows:

	Sq. Miles.
Maskinonge No. 1 east	25
Maskinonge No. 2 east	50
Maskinonge No. 3 east	44
Maskinonge No. 1 west	49
Rear Riviere du Loup Nos, 1, 2, 3	46
Peterborough east	34
Peterborough and Brandon	19
Total	270

2. Limits on the River St. Maurice and its tributaries, viz:

St. Maurice No. 3 east south half	19
Rat River No. 2 north	40
Rat River No, 2 south	40
Rat River No. 3	50
Vermillion No. 2 south	42
Vermillion No. 3 south-west half	28
Ve million No. 4 south-east half	25
Paheloganing west	40
Total	284

With the Maskinonge limits there is a saw mill run by water and steam power, in perfect running order, with dwelling house, office and stables, and about ten acres of land at the village of Maskinonge Bridge, and a piling ground of about ten acres at the mouth of the river.

The St. Maurice limits are rich in pine, and are reported to be the best in the St. Maurice territory. The timber on the Maskinonge limits is chiefly spruce.

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FINDING FRANKLIN.

Extracts from the Account of Schwatka's Search.

Thrilling Story of His Sledge Journey Over Arctic Snows.

DEPOT ISLAND, NORTH HUDSON'S BAY, August 1, 1880.

It is just two years since Lieut. Schwatka's Franklin search party landed at Camp Daly, on the adjacent mainland, and during this period its experience has been, I believe, sufficiently varied and novel to make an interesting chapter in Arctic history. We had been informed in New York that a Netchilik Esquimaux had given Captain Thomas F. Barry, when second officer of the whaler Glacier, then wintering in Repulse Bay, a spoon which proved to have been the property of Sir John Franklin; that subsequently when Barry, while second mate of the A. Haughton, was writing in his logbook he overheard the native who had given him the spoon in conversation with another Netchilik say that the spoon came from a cairn where there were many such articles, besides books, similar to the one that Barry was writing in at the time; that Barry then questioned them, procuring a reiteration of the statement, and that the books were probably still there, as Inuits had no use for them, and would not disturb them. They also expressed their willingness to guide a party of white men to the cairn. A chart was shown and explained to them, and they pointed out King William Land as the country where the cairn could be found. The natural inference was that that the books that they saw in a cairn with silverware and other articles from the Erebus and Terror were probably the records of Franklin's expedition, and the information seemed sufficiently direct and reliable to warrant the organization of the Franklin search party of 1878, 1879, and 1880. It took some time after reaching Hudson's Bay to sift these statements and find them wholly devoid of truth. But gradually they all fell to the ground, piece by piece, until nothing was left but the bare fact that he had a Franklin spoon in his possession when he reached the United States at the conclusion of his voyage in the Glacier, in the year 1873.

AN INTERESTING SPECTACLE.

We witnessed a most peculiar and interesting spectacle on the 8th, in what appeared to be a frozen waterfall, about twenty-five feet in height, where a branch seemed to flow into the Lorillard from the west. At a distance it looked like a mountain torrent which had been arrested in its progress by some mighty hand and transformed into stone. Its ripples of crystal gleamed in the sunlight and sparkled as if studded with myriads of gems. After enjoying its varied beauties for some time I climbed to the top of the bank to make a closer inspection of it. Tracing its course for a short distance from the shore I found a shallow brook which had frozen in a level place at the top of the hill, forcing the water to the right and left until it spread in a thin sheet over the face of the rock for the space of about fifty feet in breadth. Successive layers of ice were thus formed and this novel and beautiful effect produced. The first few days of our journey were excessively fatiguing. The sleds were heavy, and we often had to put on our harness to help the dogs over a ridge or through a deep drift. We had not yet become hardened, and consequently experienced much difficulty from blistered feet and chafing, but as we got rid of our superfluous flesh these petty troubles became less annoying and we did not so easily become fatigued from walking.

THE OLD MAN'S STORY OF WHITE MEN.

From Ikinnelikpatolok, the old Ookjoolik, we learned at the interview that he only once before saw white men alive. That was when he was a little boy. He is now 65 or 70. He was fishing on Back's River when they came along in a boat and shook hands with him. There were ten men. The leader was called "Tos-ard-e-roak," which Joe says from the sound he thinks means Lieut. Back. The next white man he saw was dead in a bunk of a big ship which was frozen in the ice near an island about five miles due west of Grand Point, on Adelaide Peninsula. They had to walk out about three miles on smooth ice to reach the ship. He said that his son, who was present, a man about 35 years old, was then about like a child he pointed out, that is, probably 7 or 8 years old. About this time he saw the tracks of white men on the main land. When we first saw them there were four and afterwards only three. This was when the spring snows were falling. When his people saw the ship so long without any one around they used to go on board and steal pieces of wood and iron. They did not know how to get inside by the doors, and cut a hole in the side of the ship on a level with the ice, so that when the ice broke up during the following summer, the ship filled and sunk. No tracks were seen in the salt water ice or on the ship, which also was covered with snow, but they saw scrapings and sweepings alongside, which seemed to have been brushed off by people who had been living on board. They found some red cans of fresh meat, with plenty of what looked like tallow mixed with it. A great many had been opened, and four were still unopened. They saw no bread. They found plenty of knives, forks, spoons, pans, cups and plates on board, and afterwards found a few such things on shore after the vessel had gone down. They also saw books on board, and left them there. They only took knives, forks, spoons and pans; the other things they had no use for. He never saw or heard of the white men's cairn on Adelaide Peninsula.

THE LOST EXPLORERS.

Ahlangyah pointed out the eastern coast of Washington Bay as the spot where she, in company with her husband and two other men with their wives, had seen ten white men dragging a sledge with a boat on it many years ago. There was another Inuit with them, who did not go near the white men. The sledge was on the ice and a wide crack separated them from the white men at the interview. The women went on shore and the men awaited the white people on the track on the ice. Five of the white men put up a tent on the shore and five remained with the boat on the ice. The Inuits put up a tent not far from the white men and they stayed together here five days. During this time the Inuits killed a number of seals on the ice and gave them to the white men. They gave her husband a chopping knife. He was the one who had the most intercourse with the white crew. The knife is now lost or broken and worn out. She has not seen it for a long time. At the end of five days they all started for Adelaide Peninsula, fearing that the ice, which was very rotten, might not let them across. They started at night, because then, the sun being low, the ice would be a little frozen, The white men followed, dragging their heavy sledge and boat, and could not cross the rotten ice as fast as the Inuits, who halted and waited for them at Gladman's Point. The Inuits could not cross to the mainland; the ice was too rotten, and they remained in King William Land all summer. They never saw the white men again, though they waited at Gladman Point fishing in the neighbouring lakes, going back and forth between the shore and lakes nearly all summer, and then went to the eastern shore, near Matty Island. Some of the white men were very thin, and their mouths were dry and hard and black. They had no fur clothing on. When asked if she remembered what names any of the white men were called she said one of them was called "Algoocar" and another "Toolooah." The latter seemed to be the chief, and it was he who gave the chopping knife to her husband. (Agloocar and Toolooah are both common Esquimaux names, and it is probable that the names she heard the white men called resembled these in sound, and thus impressed themselves upon her mind. Another one was called "Dok-took" (doctor). "Toolooah" was a little older than the others and had a large black beard mixed with gray. He was bigger than any of the others—"a big, broad man." "Agloocar" was smaller and had a brown beard about four or five inches below his chin (motioning with her hand.) "Dok-took" was a short man with a big stomach and red beard, about the same length as "Agloocar's." All three wore spectacles, not snow goggles, but as the interpreters said, all the same seko (ice).

DEAD BODIES IN A TENT.

The following spring when there was little snow on the ground, she saw a tent standing on the shore at the head of Terror Bay. There were dead bodies in the tent and outside were some covered over with sand. There was no flesh on them—nothing but the bones and clothes. There was a great many; she had forgotten how many. Indeed, Inuits have little idea of numbers beyond "ten." She saw nothing to indicate any of the party she met before. The bones had the cords or sinews still attached to them. One of the bodies had the flesh on, but this one's stomach was gone. There was one or two graves outside. They did not open the graves at this time; saw a great many things lying around. They were knives, forks, spoons, watches, many books, clothing, blankets, and such things. The books were not taken notice of. This was the same party of Esquimaux who had met the white men the year before, and they were the first who saw the tent and graves. They had been in King William Land ever since they saw the white men until they found the tent place.

Drinks in Every Style.

An English physician, Dr. Shorthouse, has been making an interesting series of observations on the manner in which various drinks act on different parts of the cerebro-spinal system which preside over locomotion. He says, according to *The British Medical Journal*, that "if a man partake of too large a quantity of good sound wine or malt liquor he usually staggers about from side to side, his gait is very unsteady, and if he come to grief and to mother earth he generally falls on one side or the other. If he take too much whisky, especially that abomination which goes by the name of Irish whisky, he is almost certain to be seized with an irresistible impulse to fall forward on his face. If he get drunk on cider or perry, the latter more especially, he is certain to fall down suddenly on his back, and apparently without any previous warning. He once saw a number of men, who had made too merry at a harvest feast, all fall down upon their backs, get up again, and fall down again in the same manner. He had never witnessed anything of the kind before, and was not a little amazed as well as amused. The farmer, who was a very shrewd Herefordshire man, told him that that was the effect invariably produced by perry, of which his men had that day partaken liberally. He has since that time seen several isolated cases which have corroborated the farmer's version of the action of an overdose of perry or cider." Dr. Shorthouse's researches, unhappily, have not been conducted with sufficient precision, nor have they extended over a sufficiently wide field. American investigators could have informed him that not only do different drinks affect men in various ways, but the effects differ according to the quantity of beverage imbibed. Thus, while four fingers of the whisky peculiar to cheap saloons will cause the subject violently to invert other people, a dose of fourteen fingers will lead him peacefully to invert himself. The gin of similar resorts, which is not distinguishable from the ordinary turpentine of commerce, produces pedal entanglements and precipitation upon the bridge of the nose, a fact observed by the psalmist, who made allusion to the relations of the feet to the gin, The rum of these places invariably induces pedestrian exercise upon the ear, the white Medford variety leading the subject invariably to walk off upon his left ear, while old Jamaica as invariably inspires his right ear with locomotive powers. The brandy of these resorts is as instantaneous and overwhelming in its effects as a thunderbolt, and the victim who partakes of it at once sinks down on every portion of himself simultaneously. As for the wines, their action is quite different. Instead of flooring the subject, they impel him to wander over the face of the earth and never sit or fall down, though his path be strewn with banana-peels and lie along string-pieces of docks. Altogether, Dr. Shorthouse can find a far more fertile field for investigation in these United States than is open to him in England, even without making inquiry into the more abstruse and complicated beverages of the great west, like the far-famed shepherd's delight of Nevada, one drink of which fascinating fluid moves the assimilator to steal his own sheep and hide them in the remote sage-brush from his own pursuit.

As the accounts from the terrible wreck of the steamer City of Vera Cruz come in more fully, they become highly exciting and interesting. A seaman, named Ibbot, who swam ashore on the Florida coast, after having been seven hours in the water, has given a brief but very graphic account of his experiences, which recalls the most horrible passages of marine novels. No such wreck has occurred on the American coast since the loss of the Evening Star in 1866.

MR. ARCHIBALD FORBES can claim the new South African medal and clasp, as he conveyed the news of the victory at Ulundi to Sir Garnet Wolseley and Sir Bartle Frere.

DOMESTIC RECIPES.

TO CLEAN ZINC.—Put on the zinc a little sulphuric acid and rub over with a cloth so that every part is wet. Afterward wash off with clear water, and then the zinc will be bright and clear.

SUGAR COOKIES.—One cup of butter, three eggs, one cup of sugar, one teaspoonful of baking powder sifted into flour; enough flour to roll out thin. Flavour with lemon, vanilla, or nutmeg.

GINGER SNAPS.—One cup of molasses, one cup of shortening, one cup of brown sugar, one tablespoonful of soda, one-half cup of boiling water, two tablespoonfuls of ginger. Mix stiff and bake in a quick oven.

CLOVE CAKE.—One cup of sugar, one of molasses, one of milk, one of lard, one of raisins, one teaspoonful of cloves, one of cinnamon, two of baking powder, two eggs; flour to thicken about as ginger-bread.

MOUNTAIN CAKE.—One pound of flour, one of sugar, one-half of butter, one cup of sweet milk, six eggs; beat whites separately, two teaspoonfuls of baking powder. Bake as jelly cake, with icing instead of jelly.

CHILI SAUCE.—One dozen large-sized onions, twenty-four ripe tomatoes, four teaspoonfuls of salt, eight of sugar, three of ground cloves, four of cinnamon, two of ginger, one of ground black pepper, two of mustard, two and one-half cups of vinegar. Chop tomatoes and onions fine, add spices; boil two and a half hours. Add vinegar, hot, after the ingredients have boiled one hour.

PICKLED PEACHES.—Take fine free-stone peaches, rub with a woollen cloth to remove the down, and put into a brine made of one-half cup of salt to a gallon of water—it should be cold—and let stand nine days. Then wipe them dry, pack in a jar, and cover with cold vinegar (spiced if you choose). When wanted for table halve them, removing the stone, and sprinkle with sugar. I think them very nice.

TOMATO CATSUP.—Scald and run through a sieve half a bushel of tomatoes. Add three tablespoonfuls of salt, one tablespoonful of red pepper and one of black pepper, three tablespoonfuls of mustard, two of cloves, one of allspice, one pint of vinegar, two green peppers and two onions chopped fine. Put cloves, allspice, peppers and onions in a muslin bag; put all in a kettle and simmer four hours, or until as thick as desired.

CIDER JELLY FOR THE SICK.—One pint of clear sweet cider, one package of Cox's gelatine, two pounds of white sugar, one pint of cold water, one quart of boiling water, juice of two lemons and the grated rind of one. The gelatine must be soaked in the cold water one hour. To this add the sugar, pour over it the boiling water, stir until dissolved, pour in the cider, strain through a flannel bag, wet your glasses or molds in cold water, pour in the jelly, and set away to cool; make several hours before wanted for use. This also makes a very nice dessert for persons in health.

CANNING TOMATOES.—Fifteen years' experience in canning tomatoes has taught me a few things which, perhaps, the ladies of the *Rural* would like to know. First,—the tomatoes should not be over-ripe; they should be firm enough to pare with a sharp knife, and should not remain off the vines over-night before being used. Do not scald them to get the paring off, as that alone will help to start fermentation. I always select for canning those that are yet green near the stem. Boil until heated thoroughly through; turn into any good self sealing glass (I prefer the little Mason); screw down the lid as tightly as you possibly can immediately, and if, when cold, you can tighten it more, do so. Set in your cellar and keep from the light, and your tomatoes will come out as fresh in January as when put in.

TO COLOUR BUTTER.—The bought colouring matter that I have used for several winters, I have always mixed in with the cream just before churning. The past spring when complaining to a friend that while we had beautiful golden butter, our buttermilk was so yellow that we did not care to drink it or use it for cooking purposes, she asked why we mixed it with the cream at all? Why not colour the salt? I must confess I had never thought of this before, but since I have tried it, I see no reason for returning to my old method. The deepness of colour of the salt must depend upon the lack of colour in the butter. Thoroughly incorporate it with the butter—it does not show the colour at once—let stand over night and, in the morning, just work it through before packing or making into prints.

Bee Notes for October.

From the American Agriculturist.

THE HONEY CROP.—The yield of honey from Basswood and other sources, in this section, has not equalled our expectations. During the last days of June the supply of honey, from basswood, promised to be abundant, but it was very suddenly and unexpectedly cut short. Reports from all parts of the United States indicate a small crop. We judge it to be less than one-half of the usual average; many report an entire failure. In our own apiaries we secure over 15,000 pounds from 176 colonies. Thus far we have taken from three selected swarms as follows: July 10th, No. 1, 77¼ lbs., No. 2, 66½ lbs., No. 3, 83¾ lbs.; July 13th, No. 1, 41 lbs., No. 2, 41 lbs., No. 3, 55 lbs.; July 19th, No. 1, 12 lbs., No. 2, 18 lbs., No. 3, 18 lbs. After the last date given we removed the swarms, with others, to where Buckwheat, Golden Rod. and Eupatorium are found in greater abundance than around the summer stands nearer home.

FALL PASTURAGE.—The subject of fall pasturage is of considerable importance, as, with a fair yield of honey at this season, breeding will be continued, and thus one of the essentials for successful wintering is secured. It will therefore be found profitable to study the sources from which a yield may be expected. In many sections buckwheat is the chief dependence for late honey. In other localities, like our own in the Mohawk Valley, Melilot or Sweet Clover, is of great importance. But more generally, we think that the supply will be gathered chiefly from Golden Rod and Eupatorium. These wild plants can be found upon rough, waste land, in nearly all parts of the country.

FALL MANAGEMENT. — If surplus boxes have not been moved as directed last month, it should be attended to at once. If swarms have been supplied with extra combs for extracting, they should be removed and packed safely away for use another season. The value of these combs, as well as those taken from piece boxes, cannot be overestimated, consequently great care should be taken to perserve them. Mice and rats should be carefully excluded. If disturbed by the destructive moth, the removed combs should be smoked with brimstone.

QUESTIONS AND ANSWERS.

HANGING AND STANDING FRAMES.—"Do you not crush more bees, and are you not more liable to kill the queen with the Quinby standing frame, than with the hanging frame?"—We consider the standing frame quite as desirable, yet we, as well as others, in answering such questions, should not lose sight of the fact, that every bee-keeper becomes more familiar with whatever style of hive he adopts, and, naturally, can handle it better than any other, until he acquires a large experience.

OPENING HIVES. — "How often should a beginner open his hives?"—Just as often as practical operations requires him to do so.

BEES IN A GARRET.—A correspondent in N. J. comes with the old question of the desirability of keeping bees in a garret. This story of arranging bees in a room in a garret where they will not swarm, and where the owner can go and cut out cards of honey for family use, at any time, is a very old one, and the immense swarm of bees somewhere in the rocks, where bees pour forth in masses, and honey may be found by the ton. As regards keeping bees in an attic or upper room, or even upon a roof they may be so kept, if some practical hive is properly arranged in such a location. There are even some advantages derived, where but few hives are kept. But all things taken into consideration, it is preferable to have the bees placed somewhere near the ground.

Cradles.

The following wise suggestion is from the Herald of Health.

Fortunately for children, cradles are seen more and more rarely in all families, and we are decidedly of the opinion that these soothing machines, once so popular, will soon have only a historic interest, like the spinning wheel. Still there are here and there mothers who advocate the cradle, and for such we have a word of advice. In the first place the rocking motion to which the child is subjected causes an unnatural circulation of the blood in the brain, which tends in the end to produce a state of unnatural excitability. Now if this takes place several times a day, and these motions of the cradle are carried to excess with restless and wakeful children, it is clear to our mind that the effects can only be injurious, especially when we remember the fact that children once accustomed to it are often treated with it for years. Cases are not rare of serious injury to the circulation of the brain, from violent rocking given to the infants when intrusted to nurses or ignorant children. It is not difficult with a little patience to treat an infant so that as soon as the time for sleeping approaches, he will go to sleep in his little bed without any artificial aid. If the beginning has been made, and if the mother has not been softened by the disagreeable crying of the child to rock it to sleep in the cradle or in her arms, it will be found after a few days, how quickly the child likes to go to sleep alone without the affliction of popular remedies of mothers. Many mothers will not believe this true until they have tried it and learned from experience. Although the child may cry at first, it soon learns to go to sleep quietly, and the mother has the additional advantage of gaining valuable time for rest from her domestic duties. Why does a healthy baby need rocking, more than a bird a colt, or a calf?

Talk Over What You Read.

Nearly forty years' experience as a teacher has shown how little I know of a subject until I begin to explain it or teach it. Let any young person try the experiment of giving in conversation, briefly and connectedly and in the simplest language, the chief points of any book or article he has read, and he will at once see what I mean. The gaps that are likely to appear in the knowledge that he felt was his own will no doubt be very surprising. I know of no training superior to this in utilizing one's reading, in strengthening the memory and in forming habits of clear, connected statement. It will doubtless teach other things than those I have mentioned, which the persons who honestly make the experiment will find out for themselves. Children who read can be encouraged to give, in a familiar way, the interesting parts of the books they have read with great advantage to all concerned. More than one youth I know has laid the foundation of intellectual tastes in a New England family, where hearty encouragement was given to children and adults in their attempts to sketch the lectures they had heard the evening previous. The same thing was done with books.

A MAN asleep at the top of a telegraph pole was a recent spectacle in Boston. He was a drunken repairer, who had grown drowsy at his work. A great crowd gathered, but nothing was done to arouse him, and he finally awoke in safety.

DR. DE VRY, of the Hague, has been made Companion of the Order of the Indian Empire by the Queen for his services in the introduction of the cinchono-tree into India, and in the manufacture of quinine there; and Dr. James Prescott Youle has received the Albert Medal from the Society of Arts for establishing, after "most laborious research, the true relation between heat, electricity, and mechanical work, thus affording the engineer a sure guide in the application to science and industrial pursuits."

Telegraph Blunders.

A gentleman who had gone to the country to find a summer location for his family telegraphed to his wife, "Home to-night." The wires rendered this into "Come to-night," and so the wife posted into the country at once, while her husband was making his way in a contrary direction.

Not long since a message came to the principal of a business house in the city from his travelling agent, who had reached Philadelphia—"Am at Continental House. Send some hash by mail." The agent did not intend to reflect on the food at the hotel, but wanted "cash" sent by mail.

An affectionate uncle was informed by telegraph: "Mary is to be buried on Wednesday. Come sure." Mary, who lived in Chicago, was his favourite niece, and, as he had not heard of her illness, the sad intelligence gave him a severe shock. He dressed himself in deep mourning, and made a hurried journey to the West to find a jovial party at Mary's wedding. The wires had arranged for her to be "buried" instead of "married."

Probably the worst blunder ever made was one that occurred in the case of a St. Louis merchant, who, while in New York, received a telegram informing him that his wife was ill. He sent a message to his family doctor, asking the nature of the sickness and if there was any danger, and received promptly the answer: "No danger. Your wife has had a child. If we can keep her from having another to-night she will do well." The mystification of the agitated husband was not removed until a second inquiry revealed the fact that this indisposed lady had had a "chill."

A Terrible Punishment.

Pontre Molli, Italy, can boast of a lady Abbess and reverend coadjutors whose Spartan discipline goes even beyond that of CANNING'S renowned Mother Brownrigg, "who whipped two female 'prentices to death and hid them in a coal-hole," A lay servant having been detected in stealing some bread, my Lady Abbess and two senior nuns held an impromptu tribunal and condemned her "to undergo the torments of purgatory." Most of us probably have entertained but vague notions as the nature of those torments, and will therefore learn with the more interest what are an Abbess's ideas on the point. The reverend Mother and Sisters having conveyed the delinquent to a cell where there was a stove, tied her hands securely, and then held her face to the hot metal until her eyes had lost their sight and her face was one huge blister. Some of the nuns, however, thought this discipline somewhat too stringent, and, possibly on the principle that "a fellow feeling makes us wondrous kind," and with the reflection that there was no saying but that the Lady Abbess might "go for" them next, communicated with the authorities, who have placed these severe disciplinarians in jail pending a trial.

A Grand Trade.

An old Glasgow bookseller used to give a humorous account of what was in his days an almost daily occurrence:—"Indeed," he would say, "it's but a poor trade the selling of stationery. A muckle stupit simph comes into the shop, and says, 'Gie's a bawbee's worth o' paper.' 'Is is post ye want?' 'Oh, yes.' 'Bless me, man, dae ye want short or lang!' 'Ah, no; I'll tak this ane, for it's biggest.' Well, ye wad think ane was done wi' the fallow after a' that fash, and mair nor five or ten minutes lost: but no—he's at ye yet. 'Mend that pen,' he says, handing out an auld stump to ye that naebody almost could men'; and when ye hae dun that, he follows it wi' 'Pit a wee drap ink in that bottle.' Ye pit some in in his bottle a' for naething, and syne he shoves out his great horny hand, and says, 'I'll thank ye for a wafer.' Now only think o' the fasheeerie, sic a loss o' time, forbye the ink and the wafer for naething! Ye'll see that the stationery trade's a grand trade."

THE natives of the Orkney Islands are said to enjoy good health and to live long. For these blessings they are indebted entirely to the bracing climate and to their own healthy outdoor occupations. A young woman from one of these islands was asked lately whether her people were generally long livers. With unconscious naivete she replied, "Yes, they live to a great age; there's no doctor on the island."

GENERAL.

PHYSIC.—A witty old physician being asked by a beautiful girl what good all his doctor stuff did people, answered: "Why you see, my dear, by my pills, and powders, and blisters I distract the patient's attention, while nature cuts in and cures the disease before he knows it.'

IT has been estimated that of the horses in the world Austria has 1,367,000; Hungary, 2,179,000; France, about 3,000,000; Russia, 21,470,000; Germany, 3,352,000; Great Britain and Ireland, 2,255,000; Turkey, about 1,000 000; the United States, 9,504,000; the Argentine Republic, 4,000,000; Canada, 2,634,000; Uruguay, 1,600,000.

The Fiji Islanders who, up to six years ago, when England adopted them were cannibals, and indulged in fricassed traders, with cold missionary on the sideboard, have become so civilized that they wear clean shirts on Sunday, sing hymns, eat yams and beefsteak like any orthodox Christian. What with cocoanut, cocoanut fibre, cotton, sugar and coffee to export, and a luxuriant soil to grow all these products in, the colony ought to have a grand future.

THE oldest infantry regiment in the Austrian army celebrated, on the 21st of last month, the 250th anniversary of its enrollment. It bears the name of "Prince George of Saxony, No. 11," and was raised in Bohemia in 1630, during the "Thirty Years' War." The regiment is at present quartered in Herzegovina. The day was celebrated by a grand banquet given by the officers, while the soldiers had a sort of historical masquerade, illustrating the career of the regiment.

On Saturday night Carter, the negro minstrel, who was performing in one of the big Bowery variety theatres, provoked long and loud applause with his newest story. "I was in Washington the other day," said he, "and I met an old politician there who asked me how things were in New York. I told him that a Pennsylvania man is in a peculiar fix there. He asked how that was, and I said that the man I referred to is on the Island, and is going to be sent up for four years in November."

AFTER the execution of Meneselou in Paris the other day for the murder of the little girl, Lusie Deu, his remains were conveyed to the anatomical theatre, and subjected to a singular experiment. Dr. Sapdey injected under the cutaneous tissue of the head some fresh-drawn blood from the carotid of a living dog. The result was startling, for the colour returned to the cheeks, there was a perceptible nervous tremour, while the lips slightly moved. The same treatment applied to the body produced no effect.

THE champion jack-of-all-trades belongs to England, and lives near Chichester. He has served as seaman in the four quarters of the globe, and acted as steward, sailmaker, cook, mate, and navigator. He now hangs out his sign as "Prof. Pullinger, contractor, inventor, fisherman, builder, carpenter, joiner, sawyer, undertaker, turner, cooper, painter, glazier, sign painter, wooden pump-maker, paper hanger, bell hanger, boat builder, clock cleaner, locksmith, umbrella repairer, china and glass mender, netknitter, wireworker, grocer, baker, farmer, taxidermist, copying clerk, letter writer, accountant, surveyor, engineer, land measurer, house agent, vestry clerk, assistant overseer, clerk to the Selsay Sparrow Club, clerk to the Selsay police, assessor and collecter of land tax and property and income tax, and collector of church and highway rates."

A STRIKING acoustic effect has been produced at the Covent Garden Theatre concerts, London, by locating one of the bands in the front seats of the top gallery, while the other two perform on the temporary orchestral stand erected for the promenade concerts. The instruments during the realization of this novel idea were drums and bugles to the extent of over a hundred performers, and the players, under the direction of a inventive Frenchman replied to each other from floor and gallery in a kind of ancient antiphonal call and recall, with all the vehemence of military lungs and arms, going it hard at brass and goatskin. The rapid and almost startling transitions from half stillness to thunder were very strange, and as the sound rolled and reverberated along the roof, and up and down the ample building, such a clatter and uproar was produced has been rarely equalled. The effect was remarkable, and the critics say the thing was sublime.

NET ASSETS, JAN. 1, 1879 **$23,761,342.**

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INT'REST RECEIVED, 1879 **$1,856,710.**

RATE PER CENT., **7.81**

That the above is a most satisfactory and profitable rate of interest will be conceded by all. But the careful attention paid to this, as to every other department, by the Directors of the **ÆTNA LIFE INSURANCE COMPANY,** will be more apparent when viewed in the light of the following figures, found in the latest published reports of 3 American, 3 British, and 3 Canadian Life Insurance Companies:—

NAME.	ASSETS.	INTEREST.	RATE.
Equitable, New York	$34,195,368	$1,950,680	5.70
Union Mutual	6,874,249	344,591	5.01
New York Life	35,630,557	2 021,887	5.67
London and Lancashire	851,720	37,325	4.38
Reliance, of London	2,379 410	109,720	4 61
Standard, of Edinburgh	25,939,635	1,120,255	4.31
Canada Life	3,070,988	199,504	6.49
Sun Mutual, Montreal	319,178	21,774	6.82
Mutual, Hamilton	88,068	4,684	5.26
Average	$12,149,797	$644,436	5.35
ÆTNA LIFE,	$23,761,342	$1,856,710	7.81
5 35 per cent. upon $23,761,342 is only		$1,271,131	

Upwards of **$585,000** was therefore realized in 1879 by the ÆTNA'S management from its **$23,761,342** over and above the average of the nine Companies. This is a point of great importance to persons desiring to insure their lives on the "WITH PROFITS" plan. ☞All the profits in the **ÆTNA'S** Mutual Department belong to the Policyholders.

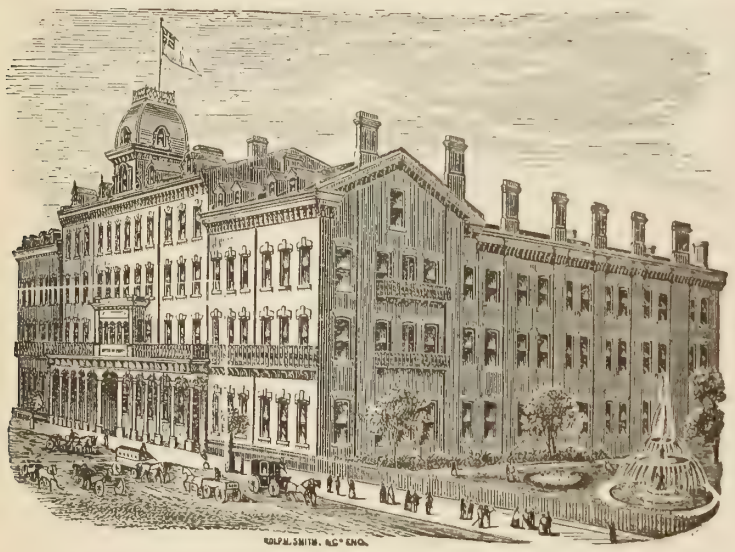
Receiving, as above shewn, a more profitable rate of interest on its funds, and also transacting its large business at a great saving in general expenses, compared with others, this Company is able to offer the public more favorable rates, as may be seen from the following examples. The three endowment columns show the premiums at 40 years of age:

$1000.

NAMES OF COMPANIES.	*Endowments, with Profits, at Death, or the end of* 10 Y'RS.	15 Y'RS.	20 Y'RS.	*Death only, without Profits.* AGE 30.	AGE 40.	AGE 60
Canada Life	$110.40	$68.80	$50.30	$18.20	$25.90	$64.30
Citizens', Montreal	103.70	69.60	53.40	19.20	26.20	63.60
Confederation	104.65	68.70	50.05	19.08	26.04	62.76
Mutual, Hamilton	104.50	68.70	50.00	.....	.....	.....
Sun, of Montreal	106.90	69 40	51.70	16.90	24.60	63.90
Equitable of New York	106.90	69.49	51.78	.....	.....	.....
Union Mutual	106.90	69.49	51.78	.....	.....	.....
London & Lancashire	106.85	69.92	51.56	18.39	25.65	66.58
Star	.....	70.64	52.60	22.92	30.49	67.91
Standard	.....	.....	51.97	20.87	28.15	65.96
Average Premium	106.35	69.41	51.50	19.51	26.63	64.58
ÆTNA LIFE	97.43	64.46	48.77	17.20	24.37	61.98
ANNUAL DIFFERENCE	8.92	4.95	2.73	2.31	2.26	2.60

Besides this important difference in the rates (which is of itself a large dividend—"a bird in the hand") the **ÆTNA** makes a liberal cash dividend every year in reduction of the above profit rates, making in most cases a very much larger difference than here shewn.

WM. H. ORR, Manager.



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VOL. I.—NO. 2. TORONTO, ONT., OCTOBER 30, 1880. PRICE FIVE CENTS.

PROSPECTUS.

The CANADA LUMBERMAN is now introduced to its patrons, and so far has met with a favourable reception.

Before its publication a large number of lumber and timber merchants and mill owners in the Provinces of Ontario, Quebec, New Brunswick, and Nova Scotia, and manufacturers whose line is to supply machinery for mills, saws, axes. files, oil, belting, sleighs, &c., were consulted in reference to the advisability of publishing such a journal.

Their opinion was that such a publication could be made highly useful to parties engaged in the various branches of trade above alluded to, as well as to those more directly interested in the mines and minerals of Canada.

Acting on their suggestions, THE CANADA LUMBERMAN has entered on this extensive and important field, with an adequate sense of the responsibility of the undertaking; and whilst craving leniency until fairly under way, we may repeat a portion of our introductory, viz: nothing shall be wanting on our part to make this journal a full and complete record of the lumber business, and all that relates to the trade in Canada. To this end the latest market reports, the contributions of trustworthy correspondents, trade circulars, etc., will be freely used, to give our readers the best, the earliest, and most reliable information that can be ascertained, concerning the important branch of business to which the journal will be especially devoted; while the mining, the milling, and the manufacturing interests will receive attention proportionate to their great claims on the public.

In short, it will be our endeavor to make THE LUMBERMAN worthy of its title in every respect; and, while giving special attention to the great staple industry to which it is devoted, it will also furnish a carefully selected amount of general reading that will make it a welcome visitor in every family.

Advertisers, especially those dealing in mill, mining, and lumbering supplies and machinery, will find THE LUMBERMAN a very favourable medium of reaching their customers, as it will circulate among these classes, and receive more attention from them than they have the time or inclination to bestow on a general newspaper.

The success of the LUMBERMAN must depend on the support it will receive from the classes above referred to; we trust, therefore, that they will overlook shortcomings at the commencement, and accord to the enterprise their generous and hearty support.

PRESERVE THE FORESTS.

The following is so applicable to the wooded portions of Canada that we consider it worthy of reproduction :—

"A great deal of interest is being manifested now-a-days in the preservation of the great forests of timber with which this country is overrun. The over-production of lumber each year is immense, and, if continued, will surely end in the disappearance entire of our forests. The question of how to prevent this misuse? is an important one and is worthy of much consideration. We certainly do not envy the position of the English people, as regards lumber, and before mill men and forest land owners leap they should think. We should have some proper safeguards for the preservation of timber and the question should always be considered, "How much lumber will be needed to supply the market this year?"

In some parts of the east there is no overproduction, and oftentimes the supply of lumber is not large enough to meet the demand. At such times lumber dealers order many thousands of feet from the west, for they are aware of the fact that western mill-men do over-produce and are not so chary with their timber lands as they ought to be. There is one very good reason for this economy on the one side and wastefulness on the other. In the east the lumbermen have seen the forests of magnificent trees disappear; they have seen the mills shut down; they have seen the workmen leave for western parts. Hence it is that the second growth is being cut very sparingly, and what more is needed each year is sent from the western part of the country.

You all know what stringent laws are enforced in England and other European countries, relative to the consumption of timber lands and the felling of trees. And in the oriental countries many portions have become uninhabitable because of the disappearance of the forests, and are now given up to ruin and desolation. The great bulk of lumber, which goes into Europe, proceeds from North America. Canada furnishes large quantities to England and the English people much prefer to buy their timber from abroad than cut down the few remaining forest trees. On ships, which carry large loads of deals from this country to Liverpool, are all sorts of pieces many of which would seem utterly useless to the average Michigan mill owner, but uses enough are found for them in a country which can boast of no timber production, and happy they are to get them.

At the twenty-ninth annual meeting of the "American Association for the Advancement of Science," which was held in Boston, several days, beginning Aug. 25th, there was a striking and most excellent paper read on the importance of taking requisite steps to preserve and cultivate the woodlands of the country. The paper, or report, was accompanied by a draft of a memorial which invites the attention of state legislature to the "great and increasing importance of providing, by adequate legislation, for the protection of the existing woodlands of the country" against "needless waste" and for the "encouragement of measures tending to a more economical use and proper maintenance of our timber supply." The report was to the effect that the forests of our country are being used and wasted to a much greater degree than their restoration by natural growth.

The committee recommended a law to protect trees planted along the highways, and to encourage such plantings by deductions from highway taxes; also the passage of a law which shall exempt from taxation the increased value of land arising from the planting of their trees where none were previously growing, for such a period as may seem proper, or until something shall have been realized from the plantation. This law may be enforced they think, by "appropriations of money to agricultural and horticultural societies, to be applied as premiums for their planting and for prizes for the best essays and reports upon subjects of practical forest culture; by encouraging educational institutions to introduce courses of instruction having reference to practical sylviculture; by laws tending to prevent forest fires; by imposing penalties against wilful or careless lighting of such fires, and enlarging and defining the powers of local officers in calling for assistance and in adopting measures for suppressing them; by establishing under favourable circumstances model plantations; and by the appointment of a commission of forestry under state authority analogous to the commission of fisheries."

The action of the association on this subject is timely and sensible and it is to be hoped that the appeal will reach the eyes and ears of the legislators in this country. If there was a limit to the number of trees felled each year, there would be no over production. As it is, a flooded market weakens prices and a light market strengthens them. Look at the subject from every point of view; if this waste goes on the extinction of timber will not only be the outcome, but it may work the ruination of the town or city in which you live. We hardly think that this extinction will come so soon as anticipated by many, but, at the same time, we feel it to be the duty of every man, to do whatever is in his power for the good of this country. Let your aim be to produce just as much as can be disposed of at a fair price and there can then be no such thing as fluctuation, and the end of the production will be postponed indefinitely.

It is quite safe to predict that many years will not elapse before the legislatures of the several states will pass laws limiting the timber cut to a certain number of thousand feet, by each mill, per year. It cannot be otherwise. The newspapers are beginning to look into the matter, the wisest men of the country are beginning to investigate the subject and soon the mill men will see the folly of their ways. This is an age of progression.

SHADE TREES.

Our farmers make a great mistake when they neglect to plant young trees along the roads and their fences; and when they indisciminately and ruthlessly cut down all the trees on the homestead. It is true that in clearing land, it is sometimes difficult to save any portion from the fire; yet groves should be planted in corners of fields, and fences, and roadsides should not be neglected. The Association of Agriculture and Arts granted a gold medal, this year for the best kept farm, to J. P. Carpenter of Townsend, in the County of Norfolk. The judges were so much pleased with the wooded portion of the farm which had been preserved, that they noticed it specially in their report as follows :

"Towards the back part it becomes undulating and gradually rising, finishes up with a magnificent piece of woods at the farm. This wood of twenty acres is beautifully kept and park-like, and forms a very attractive feature, running along a good part of the back of the farm, where the land rises to the highest point. It forms a background and a finish to what no doubt is one of the finest farms in Ontario. And fortunate it is that this property did not fall into the hands of some Vandal, who, by this time, might have had this, as well as the other two pieces of wood, which are equally beautiful, converted into so many barrels of potash, and thereby have destroyed what would require the t of two or three generations to replace. ime

WHITBY.

Last Wednesday the schooners Bentley with 500,000 feet, Adriadna with 150,000 feet, and Blakely, with 140,000 feet of lumber on board, sailed from Whitby harbour, for Oswego, making the largest shipment of deals from that point, on any given day, within the recollection of the oldest inhabitant. The lumber belonged to Messrs. Bigelow & Trounce, Port Perry.

A lumber firm of Carleton Place is said to have paid $14,000 to the Canada Central railway for freight on lumber during the past four months.

Shipping at Montreal is going on with all possible speed. Piles of lumber are rapidly diminishing. It is expected that the present stock of lumber will be all cleaned out within the next two weeks.

A REALLY GOOD CASE.

A LEGEND OF ST. MICHAEL'S HOSPITAL.

Every one knows that St. Michael's, as we shall take the liberty of calling it, is the largest and most celebrated of tht London hospitals. It is situated quite in the heart of the city; and is about equidistant from London Bridge, Westminister, Gower Street, Smithfield, and Whitechapel. I was student there, and there the happiest days of my life were passed. And now to my story.

A large number of the students had gone down for the short Christmas vacation, and I should have gone also, but was just then "dresser" to Carver Smith, and could not leave town; moreover, it was my week of residence. I must beg you to remember, what is perhaps but little understood by the general public, that a large part of the watching and care, and a certain proportion also of the treatment of hospital patients, devolve upon assistants selected from the senior students. Some of the less important appointments, such as the "dresserships," are held by every student in turn; but the more responsible offices, some of which require twelve months' residence in the hospital, can only be gained by a few men each year; and for these appointments, which are esteemed positions of great trust and honour, and which are exceedingly valuable as stepping-stones to professional success, there is very keen competition. On the surgical side of the hospital, each of the four visiting surgeons had a resident house-surgeon; and to be Sir Carver Smith's "H.S." was one of the highest ambitions of a "St. Mike," for Sir Carver was at that time one of the leading English surgeons.

A man named George Adams held the post at this time; and as he is the hero of my story, so far as I have a hero, I will just say a word about him. He was one of these men that we occasionally meet with, who seem to stand head and shoulders above their fellows—very quiet and reserved, and when he chose, quite inscrutable. No one knew where he came from. But his very great ability, his calmness in all emergencies—I never saw him discomposed except once—his mature judgment, and his great kindness, won him the respect alike of the students, the nursing staff, and the surgeons. Under him were four dressers, junior men, who assisted in the hospital under his direction. I was one of them. Each week, one of us in turn resided in the hospital; and as I said, Christmas week fell to my turn, and that is how I came to spend Christmas in St. Michael's. I ought to add that there were four assistant-surgeons to the hospital; but their care was over the out-patient department, and it was only in the absence of the visiting surgeons that they had any duty in the wards.

Well, it was Christmas night, and our work for the day was done, except, some late visits to the wards by-and-by; and of course any casualities that might turn up. But Christmas day is usually slack in that respect. It is medical rather than surgical casualities that Christmas day produces. We had got up in honour of the day a little entertainment in an empty ward, for any of the hospital inmates who cared to attend and were able to do so.

We had a famous little programme. One or two of our residents could play and sing well; another had a curious facility in whistling to the piano; another was an amateur ventriloquist and prestidigitateur; and I fancy there were also some recitations and tableaux to come off. Also, there was one of the patients, an old sailor, who could sing in a grand rich stentorian baritone and bring down the house. Our chairman—Adams, of course—had just begun, and was delivering himself in a semi-serious way of some very eloquent remarks, amidst great applause—for nothing pleases the lower classes better than a few oratorical flourishes—when "tinkle, tinkle, tinkle, tinkle" went a small high-pitched imperious bell. It was the accident-bell!

Oh, ye lay mortals, ye little know how the social and domestic joys of a medical man are at the mercy of a bell! We invite our friends to tea, we welcome them, and anticipate a pleasant evening, and—there goes the bell! We come home tired and wet, change boots for slippers, and get comfortable by the fireside, and—there goes the bell! We turn into bed on a cold night, and just get warm and snug when—there goes the bell! My bell-experience began that night at St. Michael's, and I shall not soon forget it.

It was Sir Carver's "taking in week;" and his assistants had to attend to the accidents. Adams nodded to me; and off I went to investigate, knowing it might be anything from a cut finger to a railway smash. I found a scene of considerable excitement in the accident-room. Two policemen, aided by a crossing-sweeper and a cabman, had just brought in a patient, and some other spectators had pushed their way in out of curiosity.

"Just happened outside, sir; knocked down by a runaway cab, sir."

"Lost a lot of blood; 'fraid it's a bad case, sir." Thus the policemen.

"Ask Mr. Adams to come down at once; clear the room," I said.

It was a young fair-haired girl of eighteen or nineteen, perfectly pale, unconscious, and almost pulseless. A strange contrast to her rough, swarthy, weather-beaten bearers. A deep wound in the neck was bleeding profusely; but on tearing open the dress, I found I could stop the hemorrhage almost entirely with my finger.

Adams was there immediately; in a minute he knew all about it, and had settled his course of action. Quietly he said: "Send for Sir Carver. Take her to the operating-room at once. Ask the other men to come." And then to me: "Keep up steady pressure, and don't take your finger away for an instant."

Nothing could be found out concerning her. No one was with her when she was struck down. She was very tastefully, though not expensively dressed. Her features were exceedingly regular and pretty, and when the colour was in her face she must have possessed a very considerable share of good looks. Nothing but a purse and a handkerchief were found in her pocket. The former was well filled, and the latter was marked "E. Stead." Adams said at once that she was a lady.

I do not know whether it ever happened before at St. Michael's that on the occurrence of a sudden emergency, no one of the surgical staff was at hand. Strange to say, it happened so to-night. Sir Carver Smith and three of the asssistant-surgeons lived close to the hospital; but in five minutes the messenger returned with the news that Sir Carver had been called to some aristocratic celebrity at the West End, who had met with an accident, and had taken one of the assistant-surgeons with him. The second was out of town; and the third, who had been left to act in emergencies, had been taken suddenly ill.

We had been discussing the case, and offering advice upon it with all that calm assurance which characterizes embryo surgeons. But matters now became serious. Half an hour would suffice to summon one of the other surgeons; but it was plain that something must be done at once. We all looked at Adams, who had said very little hitherto, but had gone on making everything ready. He simply said: "Begin to give chloroform; I am going to operate."

"What are you going to do?" we asked.

He told us; but I will not inflict any details upon my readers, but will simply say that the sharp end of a broken shaft had made a narrow deep gash in the root of the neck, and had wounded a large artery. The operation contemplated, afforded almost the only chance of life; and to delay it any longer would, Adams said, be throwing that chance away. It was an operation of the highest difficulty and danger under the present condition of the parts; and could its performance have been anticipated, the theatre would have been crowded with spectators from all the hospitals in London. And here was a young surgeon of twenty-five, called on at a few minutes' notice, to undertake what many a long experienced surgeon might hesitate to attempt; for it was impossible to perform it without much additional loss of blood; and it was not at all improbable that the patient might not survive the operation, to say nothing of after-dangers.

Adams carefully explained to the other house-surgeons what assistance they would have to give him; and when the patient was ready, commenced at once. Perfect silence reigned, broken only at intervals by a word from the operator; but indeed he had little need to speak, for we were well drilled at St. Michael's, and everything he needed was put into his hand almost before he asked for it. I think I can still see that quiet eager group of young men under the brilliant gaslight, standing around the pallid, slumbering, unconscious girl; and in the centre the young surgeon, cool, collected, with steady hand, without hurry, without hesitation, doing his work. I have witnessed many of the most brilliant operators in England, and of course have seen Adams himself many times in that operating-room in later years; but I think I never saw that night's operation surpassed either by himself or by any one else. A special demand sometimes calls forth special powers, and acts almost like an inspiration; and so it seemed now.

In a short time it was done, and successfully done; and the patient was carried away to a quiet ward, where she was duly cared for by the nurse in charge, Adams, and Sir Carver Smith, who came later on. I think Adams stayed up all night.

Our miscellaneous entertainment did not come off; but we scarcely regretted the change of programme. In a place where accidents are hourly, and operations daily occurrences, one more or less seldom creates much excitement; and when I go on to say that this case excited more interest among residents and non-residents than almost any other case I ever saw in the hospital, I wish you clearly to understand that this fact was due entirely to the extreme professional interest of the case, and the great enthusiasm of St. Michael's men for the study of surgery. At the same time I may state, although not particularly bearing on the question, that the patient was an uncommonly pretty girl; and day after day passed by without any light being shed on the question as to who she was and whence she came—circumstances quite sufficient to excite in a mind not preoccupied with such matters as burden the intellect of the average medical student, the liveliest interest and curiosity.

After the operation, she was at first too ill to be interrogated; and when she got a little better, she declined to give any information; at any rate none could be obtained from her. Perhaps she was a little "queer" with feverish or hysterical excitement,

At the expiry of two days I went in to help with the dressing. She was very grateful for everything done for her, and bore her pain very well. For a long time she was in a very critical state. As the cuphonious phrase of the young profession went, "She had a very close shave for it." At the end of three weeks however, she was in fairly smooth-water; and for the first time some of the clinical class went in with Sir Carver to see the case. He had hitherto said nothing on the subject of the operation. He was a man of few words; but one word of praise or blame from him was never forgotten by any of us. Turning to us from the patient, he said: "This, gentlemen, is a case of so-and-so;" and he briefly explained it. Then he added: "Nothing but the most exceptional circumstances could justify a house-surgeon in this hospital in undertaking an operation of such importance. In this case, those exceptional circumstances existed. The operation is one of great difficulty and rarity. I have once, many years ago, performed it myself, and the patient died. Had my patient recovered, such a recovery would *then*, I believe, have been without precedent. But the gratification to myself of having performed the first successful operation, would not have been greater than is my gratification now at having under my care a case which will, I believe, recover, and whose recovery will be due without doubt to the prompt and skilful action of a St. Michael's student, my own house-surgeon, Mr. Adams."

"Strong for Carvy, and good for Adams," was the general comment. Adams pretended to be writing notes; but there was not one of us who would not readily have suffered "ploughing" in our "final college" to gain such a word from Carver Smith.

Yes; she recovered rapidly; and prettier and prettier she grew as she got better. She talked very little, and said nothing at all to help her identification. Inquiry was fruitless, even though the case got into the newspapers. The interest among the students increased daily. It was reported that she was an heiress who had quarrelled with her guardian; that Adams was madly in love with her; that she was waiting for him to propose, and then would marry off-hand; that Adams knew all about her, but kept it snug. And the men got to chaffing him in a mild sort of way, wanting to know the "state of the heart" and the chances of "union by first intention." But Adams was impenetrable. Personally, I am inclined to think that whatever the condition of his patient's heart might be, *he* was a little affected in that region She was evidently very fond of him, and liked no one but him to dress the wound. Still the mystery increased.

At last one afternoon I was sitting in Adam's room in a leisure interval, when a lady's card was brought in. It had a deep black border, and bore the inscription: MRS. STEAD, The Cedars. She wished to see Mr. Adams. Immediately afterwards, the lady was shewn in. Adams motioned me to stay. She was a fine, tall woman of fifty, dressed in deep mourning, with hair just turning gray. a firm mouth, soft keen gray eyes, and a face combining intellect and kindness.

"Have I the pleasure of speaking to Mr. Adams?" she said.

He bowed.

She then produced a paper which gave an account of our famous case and of the part Adams had played in it.

"May I inquire whether this patient is still in the hospital? Can I see her?"

"Yes; certainly. Would the lady be able to identify her? Would it not be better for the patient to see the card first, to avoid sudden excitement; that is, if the lady's visit were likely to cause excitement?"

"Perhaps it would be better to take up the card, and say that Mrs. Stead desired to see her."

Wonderfully calm and self-possessed the lady seemed to us; and yet she could not entirely suppress some signs of emotion or excitement. She said that illness in her family had prevented her from seeing the papers for some time, or she would probably have been here before.

I took the card up and shewed it to the patient. She turned very pale, then buried her face in her pillow and burst into tears.

"Shall the lady come up?" I said.

I thought she sobbed out "Yes."

The visitor came up. Slowly and calmly she walked up the ward. The news had somehow got about, and several of the men found that they had business in that part of the hospital just then. The lady stood by the bed, and said softly:

"Elizabeth?"

The girl looked up, and their eyes met. One glance at the face was enough.

"Yes," said the lady; "I can identify her."

"It is your daughter?" asked Adams.

"It is my cook," said the lady—"Elizabeth Saunders."

I think I said that I only once saw Adams considerably discomposed, and that was on the present occasion,

"I—I—thought her name was Stead," he said, and his eyes rested on a pocket-handkerchief lying on the pillow. The lady's eyes followed his, and a slight smile played on her features.

Yes; it was even so. The acute scientific observer, the far-sighted young surgeon, famed for his diagnostic acumen, had seen through this case, but had not seen through his patient. It turned out that the girl, being remarkably good-looking, and having acquired, from a previous situation in a nobleman's family, a very correct way of speaking and some very ladyish manners, and frequenting places of public amusement, where she usually attracted a good deal of attention. Her mistress having been called away from home to nurse a sick relative, had allowed her servant to go, as she thought, to visit her parents in the country; but the girl, having her wages in her pocket, had preferred to remain with an acquaintance in Londay, where she enjoyed her Christmas holidays very much to her own satisfaction, until her accident put a stop to her manœuvres, or rather changed her field of action. Finding, as she recovered, that she was being addressed as "Miss Stead," and that she was the object of much interest and attention, it seems to me—judging by what experience of human nature on its female side I have since acquired—not very remarkable that she preferred to keep up the delusion; golden silence being her main line of tactics. And, fair readers, do you think it very contrary to your experience of human nature on its male side, that an otherwise exceedingly acute young man should be the subject of a delusion of this particular kind?

The lady spoke very kindly to the girl; and guessing, I fancy, how matters stood, said some very graceful things to Adams. Subsequently, you will perhaps be glad to hear, she proved a very kind friend to him, and her influence was of no small assistance to him in his future professional advancement. She became, in fact, quite a mother to him, though not a mother-in-law.

I really do not know what befel the girl, except that, at her own desire, the lady obtained for her "a situation in the country, out of the way of temptation;" and that she proved to be a faithful servant.

I am sorry to have to state that public interest in this case at St. Michael's somewhat rapidly declined after Mrs. Stead's visit; perhaps because, as the *Lancet* said, the interesting symptoms had all disappeared. But I said then, say now, and always will say, that it was, from all points of view, "A Really Good Case."

WOMAN GOSSIP.

A Bridal Greeting.

On thy bridal morning
Skies are blue and bright;
With how sweet an aspect
Day has followed night!
O! thou gentle maiden,
With the amber hair,
Be thy future bright and pleasant
As this morn is fair.

Fashion Notes.

BUTTONS are more wildly extravagant than ever.

BOTH square and round trains are worn in evening toilet.

FANCY feathers show the influence of the craze for plaided effects.

SOME very small bonnets appear among late novelties in millinery.

THE "Abbe" is the new hat worn by ladies returned from abroad.

A TRIMMING much in vogue is black net embroidered with jet beads.

DEEP tucks on dresses are a recent revival of a fashion of ye olden time.

FRENCH modistes add flowers as accessories to all but the simplest dresses.

PLUSH roses form the favourite garnitures of many lovely evening dresses.

IRISH point and church lace form the most fashionable mull neck scarfs.

BLACK dresses still hold their own and are as elegant and fashionable as ever.

AFTER the rage for big bonnets has subsided, the medium sizes will probably be most worn.

BONNETS, muffs and costumes match when worn by the most fastidiously fashionable women.

JET or coloured crystal beads enrich all the richest trimmings and embroideries on dressy costumes.

Waifs.

A GOOD soldier is an easy catch. He is always ready for an engagement.

THE spots on the sun do not begin to create the disturbance produced by the freckles on the daughter.

WHEN a man and a woman are made one, the question "Which one?" is a bothersome one until it is settled, as it soon is.

A LADY assistant in a glove shop was almost mad when a fellow asked her if she had any nice dark-coloured kids.

WHEN does a budding young damsel burst into fruit?—When she becomes the apple of somebody's eye.

SOME crusty, rusty, fusty, musty, dusty, gusty curmudgeon of a man gave the following toast at a celebration:—"Our fire-engines—may they be like our old maids ever ready, but never wanted!"

"I CAN'T go to Europe," a lady is reported to have said; "I am reading forty-five continued stories, and my limited means would not let me pay the postage."

WHEN old Mrs. Pinaphor heard that a certain young lady had "gone to Europe to catch a husband," she innocently observed: "Why, is there no one in this country who will have the girl?"

THE faculty of an Ohio female seminary has issued orders that no pupil shall have more than one male visitor per week. The smart girls invite their young men to call on Sunday, so that when their fathers come on Monday the old men find themselves barred out.

A YOUNG man with an umbrella overtook an unprotected lady acquaintance in a rainstorm, and, extending his umbrella over her, requested the pleasure of acting as her rainbow. "Oh!" exclaimed the young lady, taking his arm, "you wish me to be your rain-dear." Two souls with but a single umbrella, two forms that stepped as one.

Poetry of the Table.

More appetizing than all patent tonics is a perfectly arranged table, sparkling with cleanliness. So let us be a little extravagant in our fresh tablecloths, when soap, water, and a little labour are all we have had to pay. And now we must decide, shall we have the best china and do with some stoneware for every day? Or shall we pay ourselves the respect usually reserved for company? Clearly, we are the persons to whom it is of the most importance. Shall we sit down to odd plates and cracked saucers six days, that we may enjoy gilded china on the seventh? By no means. We will have plain white French china, which can always be matched when broken, and we will sit down to it every day. In the same way we will bring out the plated knives and silver forks, and partake of our food with a sense of our own deserts. We shall feel increased respect for ourselves, also, with napkins and butter plates; so those we will have.

A Girl Monk.

Matrena Ivanovna, a Russian peasant girl of two-and-twenty, has recently acquired considerable notoriety in her native land, says *The London Telegraph*, through the fact that, under the monastic designation of "Father Michael," she succeeded in passing several months in the cloister of Staraja Ladoga, without incurring the least suspicion on the part of her fellow-monks that she was other than she seemed to be. Forced by her father to marry a person whom she detested, she disappeared from her home on the day succeeding her wedding, and, upon search being made, her clothes and two long plaits of her "back hair" were found near the Wolchoff river, as well as a letter in her handwriting, stating that, rather than live with her husband, she had resolved to drown herself. Her relatives, believing that she had really committed suicide, forbore any further inquiry, and mourned for her as one dead. She, however, dressed in man's clothing, applied last March for admission to the above-named monastery, and was duly received into the confraternity on probation, taking the minor vows, and officiating as coachman to the prior. There is no knowing to what ecclesiastical dignities she might not in time have risen, had not unkind fortune decreed that a native of her own village should have been sent to Straja Ladoja by his master for correction at the hands of the brethren, his offense being inveterate drunkenness. Promptly recognized and denounced by this indiscreet toper as Matrena Ivanovna, a friend of his youth, "Father Michael" was handed over to the police authorities by the indignant monks, and is now awaiting trial for imposture upon a religious community—a crime likely to be visited with severe punishment in so priest-ridden a country as Russia.

Small Feet.

An American missionary, Miss Norwood, of Swatow, has lately described how the size of the foot is reduced in Chinese women. The binding of the feet is not begun till the child has learned to walk and do various things. The bandages are specially manufactured, and are about two inches wide and two yards long for the first year, and five yards long for subsequent years. The end of the strip is laid on the inside of the foot at the instep, then carried over the toes, under the foot, and round the heel, the toes being thus drawn toward and over the sole, while a bulge is produced on the instep, and a deep indentation in the sole. The indentation, it is considered, should measure about an inch and a half from the part of the foot that rests on the ground up to the instep. Successive layers of bandages are put on till the strip is all used, and the end is then sewn tightly to the ground. Large quantities of powdered alum are used to prevent ulceration, and lessen the offensive odour. After a month the foot is put in hot water to soak some time; then the bandage is carefully unwound, much dead cuticle coming off with it. Ulcers and other sores are often found on the foot. Frequently, too, a large piece of flesh sloughs off the soles, and one or two toes may even drop off, in which case the woman feels afterward repaid by having smaller and more delicate feet. Each time the bandage is taken off the feet are kneaded, to make the joints more flexible, and are then bound up again as quickly as possible with a fresh bandage, which is drawn up more tightly. During the first year the pain is so intense that the victim can do nothing, and for about two years the foot aches continually, and is the seat of a pain which is like the pricking of sharp needles. With continued rigorous binding, the foot in two years becomes dead, and ceases to ache, and the whole leg, from the knee downward, becomes shrunk, so as to be little more than skin and bone. When once formed, the "golden lily," as the Chinese lady calls her delicate little foot, can never recover its original shape.

How a Married Woman Goes to Sleep.

There is an article going the rounds entitled "How Girls Go to Sleep." The manner in which they go to sleep, according to the article, can't hold a candle to the way a married woman goes to sleep. Instead of thinking what she would have attended to before going to bed, she thinks of it afterward. While she is revolving these matters in her mind, and while snugly tucked up in bed, the old man is scratching his legs in front of the fire, and wondering how he will pay the next month's rent. Suddenly she says:

"James, did you lock the door?"

"Which door?" says Jim.

"The cellar door," she says.

"No," says James.

"Well, you had better go down and lock it, for I heard some person in the back-yard last night."

Accordingly Jim paddles down stairs and locks the door. About the time James returns and is going to get into bed, she remarks:

"Did you shut the stair door?"

"No," said James.

"Well, if it isn't shut the cat will get up into the bedroom."

"Let her come up, then," says James, illnaturedly.

"My goodness, no," returned the wife. "She'd suck the baby's breath."

Then James paddles down stairs again, and steps on a tack and closes the stair door, and curses the cat and returns to the bedroom. Just as he begins to climb into his couch his wife observes:

"I forgot to bring up some water. Suppose you bring up some in the big tin."

And so James with amuttered curse goes down into the dark kitchen and falls over a chair, and rakes all the tinware off the wall in search of the "big" tin, and then jerks the stair door open and howls:

"Where the deuce are the matches?"

She gives him minute instructions where to find the matches, and adds that she would rather go and get the water herself than have the neighbourhood raised about it. After which James finds the matches, procures the water, comes up stairs, and prepares himself to retire. Before accomplishing this feat the wife suddenly remembers that she forgot to chain the dog. A trip to the kennel follows, and he once more jumps into bed.

Presently his wife says:

"James, let's have an understanding about money matters. Now next week, I've got to pay—"

"I don't know what you'll have to pay, and I don't care," shouts James, as he lurches around and jams his face against the wall; "all I want now is sleep."

"That's all very well for you," snaps his wife, as she pulls the covers viciously; "you never think of the worry and trouble I have."

A Mixed Telephone.

The telephone, the wonderful offspring of Edison's great mind, is an instrument which is now looked upon as indispensable to the world's good, but it, like a great many other things, will sometimes get out of humor and act in a very crooked manner.

Mr. Charles Augustus Fitzmont is an enterprising but bashful young clerk, whose place of business is on King street, and he is most warmly attached to a fair maiden who lives in an up-town residence with a telephone in it. Oft the telephone has been used as a medium through which he has breathed words of heart-pounding love in the ears of the one he so fondly worshipped, and never did he know it to fail in the performance of its duty until yesterday, when it caused him to moan—yes, to tremble like an aspen leaf, and smite one knee against the other.

At the time mentioned Charles had not seen his affinity for over forty-eight hours, and he determined to inform her of whom he was fondly dreaming that he would be up to the house that night and sit out on the front porch with her and sigh at the moon. Seeking the telephone while no one was in the office, he said:

"Is Miss Minnie at home?"

"Yes."

"Tell her to step to the 'phone, please."

"Is that you, Charlie?" inquired a cooing voice skimming along the wire.

"Yes, dearest, it is your own Charles."

"Oh, Charlie, what made you stay away so long? You must come up to-night because——"

"The baby was born an hour ago."

"Wh-at baby?"

"Your own baby."

"My baby!" shrieked the young woman, "why, I'm—I'm surprised that you—you would say such a thing. I—I didn't expect it——"

"Neither did I; I just heard it a moment ago."

"You don't believe this—this fearful report? Say—say you don't. You know I haven't got a baby I never did have a baby in my life," howled the young woman in a frenzy.

"Ha! ha! old fellow, you feel so proud and happy that you have to indulge in a joke, do you? Allow me to congratulate you. It's a boy, and weighs twelve pounds. Good-bye."

"Miss Bunter—I say, Miss Bunter——"

"Oh, Charlie! what is the matter?"

"Matter enough. I want to know the man's name who told you that scandalous falsehood. I'll have his gore before sunrise. I'll follow him over sixteen different states to kill him. I'll crush him. I'll mutilate him. Tell me, was it that squint-eyed Bangs who brought that horrible lie to your ears?"

"What lie, Charlie? What do you mean?"

"I want to know who told you that—that I had a baby born to me an hour ago that weighed twelve pounds. Who is the villain?"

A piercing shriek was the only reply that came over the wire, and then Charles realized for the first time that there was some dreadful mistake, that the telephone had become mixed, and he fainted.

Trouble Brewing in Norway.

THE KING ACCUSES THE STORTHING OF EXCEEDING ITS CONSTITUTIONAL POWERS.

(From the Paris Francaise.)

Not long ago I wrote to you about the constitutional conflict between the Storthing and the Crown on the subject of the attendance of Ministers at the debates in the National Legislature. This conflict is not the only one. A second has arisen which seems likely to reach irritating proportions. At the close of the recent session, several projects for the reorganization of the army, which had been referred to Military Commission, were still incomplete. At one of its last sittings, that of June 19, the Storthing authorized the Commission to sit after the adjournment, and until the beginning of the next session.

Upon the advice of the Norwegian Ministers, the King refused, on August 18, to sanction this action, declaring that it was impossible for him to acquiesce in the introduction of a practice by virtue of which the Storthing could empower a certain number of its members to sit and deliberate in the intervals of the sessions under the name of a committee. The royal decree sets forth that, "in naming a Parliamentary Commission of this nature, the Storthing committed a trespass upon the domain of the Executive, and usurped administrative functions not belonging to it. Furthermore, in authorizing one of its committees to work outside of the sessions, it exceeded its powers in another way, notably by extending the duration of its sessions beyond the term fixed by the Constitution; that is to say, beyond two months." Moreover, "a commission constituted as this one is [three military men, two of whom are very advanced members of the Opposition] does not offer the necessary guarantee that the projects, several of which have not even been examined by the Government, will be subjected to a sufficiently intelligent and impartial study."

It was this last consideration, evidently, that decided the King, for he immediately proposed a royal commission, to be composed of the three members of the Parliamentary Committee and three new and competent members to be named by the Crown. It is clear that this proposition will have to be ratified by the Storthing, which must decide whether or not to permit its members to sit on this new Commission. At this moment it is announced that the President of the Storthing, who is also the President of the Military Commission, has called a meeting of the latter. Naturally this step is represented by the Ministerial press as a grave insult to the sovereign.

BISHOP ELIGIO COSI, at Chang-Tong, in China, has invented an alphabet of 33 letters, by means of which all the sounds of the Chinese language can, it is said, be represented. The Emperor of Austria has been so well pleased with the invention that he has presented the Bishop with a complete typographical apparatus, so that the new alphabet may be employed in printing. The characters used by the Chinese number 30,000.

QUEBEC.

Since the opening of navigation over eight hundred vessels have entered at the Custom House.

The market continues firm. Last week's transactions were—Liverpool, all timber, 25s. Greenock, timber, 25s. and 26s. Plymouth, timber, 25s. Limerick, timber, 28s.; deals, 70s. London, deals, 65s., nominal.

Steamship freights—Liverpool—a parcel of deals, 60s.

The *Morning Chronicle* reports that in timber, deals and staves, the market continues firm. There have been few transactions during the week. Some small parcels, for immediate shipment, have changed hands. A quantity of elm of 45 feet average, was sold at 28 cents per foot.

Deals—Few sales have taken place during the week, and both pine and spruce are in demand.

Staves—Are scarce. A parcel of pipe was sold at something above £80.

The sale of Crown Land timber limits, which took place on the 15th inst., realized about $280,000. All the lots offered, except, a few in the lower St. Lawrence, were sold at an advance in the upset price. There was brisk competition for the berths on the Upper Ottawa, Block A. The attendance was large.

Among those present were Hon. Senator Skead, Messrs. Jas. G. Ross, (President of the Quebec Bank,) J. Gouin, James McLaren (President of the Ottawa Bank), James Poupore, M. P., Moore, McLaughlin, Thistle, Thomas Smith, W. C. Edwards, David Moore, King, Church, E. Fitch, J. Bowen, W. Brodie, Col. Forsyth, Smith Lynch, Campbell, Edwards, Fitzpatrick, Ward Higginson, Henderson. The Assistant Commissioner, Mr. Tache, announced the particulars and conditions of the sale, when Mr. Lemoine proceeded to sell the different lots by auction. The limits which brought the highest prices are those in the Ottawa District.

In the first range, Upper Ottawa Agency, limit No. 4, 39 miles, was sold to E. Fitch for $260, the upset price $75; No. 5, 61½ miles, was sold to James Connolly for $240, upset price $100; No. 6, 38¾ miles, was sold to W. C. Edwards for $220, upset price 100; No. 7, 16¾ miles, was sold to Mr. Lynch for $230, upset price 100; No. 8, 14 miles, was sold to Mr. Lynch for $190, upset price $100; No. 9, 29½ miles, was sold to Mr. Lynch for $165, upset price $75; No. 10, 42½ miles, was sold to Mr. Fitzpatrick for $85, upset price $75; No. 11, 42 miles, sold to Mr. Fitzpatrick for $92, upset price $50; No. 12 37¾ miles, sold to Mr. Lynch for $70, upset price $50. In the second range Mr. Fitzpatrick purchased limit No. 4, 40 square miles, for $80, upset price $75; No. 2, to Mr. Ward, at $325, upset price 75; No. 3, to Mr. Ward at $345, upset price $60; No. 4, to Mr. Moore, for $310, upset price $100; No. 5, to Mr. Edwards, for $300, upset price $100; No. 6, limit was bought by Mr. Fitzpatrick for $290, upset price $100; No. 7, limit by Mr. Jas. Connolly for $190, upset price $100; No. 8, by Mr. Thistle, for $86, upset price $75; No. 9, by Mr. Moore, for $80, upset price $75; No. 10, 11, and 12 limits were sold to Mr. Campbell, for the up set price of $60, $60, and $50. The whole of the limits in the third range, Block A, were sold as follows:—No. 1, to Mr. Thistle for 100, being the upset price; No. 2, to Mr Campbell for $80, upset price $75; No. 3, to Mr. James Connolly for $100, upset price price $60; No. 4, to the same, for $105, upset price $75. The other numbers—5, 6, 7, 8, 9, 10, 11, and 12 were sold to Mr. Campbell at prices which were fully 20 per cent. in advance of the upset price. The limit in Lichfield of six miles was sold to Mr. W. C. Edwards for $115, upset price $100. In the Lower Ottawa agency Letter A was sold to Mr. Henderson for $105, upset price $30; Letter B to Mr. Higginson for $55, upset price $50. The other lots were principally in the Montmagny, Rimouski, Granville, and Saguenay agencies, and brought somewhat lower prices.

SUPERVISOR OF CULLER'S OFFICE.

Comparative statement of Timber, Masts, Bowsprits, Spars, Staves, &c., measured and culled to date:—

	1878.	1879.	1880.
Waney White Pine	1,846,640	1,444,609	2,099.454
White Pine	7,917,756	2,507,729	3,978'612
Red Pine	1,359,756	741,499	1.017,606
Oak	1,516,223	828,407	1,539,141
Elm	177,653	318 074	932,784
Ash	36,507	47,161	237.142
Basswood	923	280	363
Butternut	39	70	645
Tamarac	29,306	6,691	30,803
Birch and Maple	180,416	121,224	575,464
Masts and Bowsprits	93 pcs	50 pcs	4 pcs
Spars	42 pcs	26 pcs	23 pcs
Std. Staves	299.3.1.8	171.5.3.7	62.9.2.4
W. I. Staves	564.1-3.9	169.2.2.26	417.5.3.19
Brl. Staves	.....	.....	.....

WM. QUINN,
Supervisor.

Quebec, 22nd Oct., 1880.

NEW BRUNSWICK ITEMS.

Our St. John's correspondent supplies the following statement of operations on the St. John River and tributaries:

Mr. A. F. Randolph is estimated to take out this winter about 20 million. The principal operators for him are, W. F. Fowler, 5 million; Coulter & Hagerman, 2; G. J. Baird, 4; Beringe Bros., 2; E. Brooks, 1; C. Clayton, 1; Grantham Hopkins, 1; Harrey Lawrence, ½ million. The balance will be obtained in smaller lots.

Mr. W. H. Murray, 27 millions. Mr. Robt. Connors will take out for him 13 million; F. Moore, 8; J. McKeen, 2; W. H. Cunliffe, 4.

Messrs. Miller & Woodman, 17 million. The principal operators for this firm are, James Hays, 8 million; Hammond & Watson, 1; and J. Yerxa, 2 million.

Mr. Alex. Barnhill, 3 million, by Mr. West.

Messrs. Hayford & Stetson, 2 million cedar for shingles, and 6 million spruce logs.

G. B. Dunn, & Son, 10 million.

Mr. Jewett will take out by Jarvis Hayward, 6 million, aud by W. S. Stephens, 3 million.

Mr. Robert Aiken will cut 2 million for Mr. Cushing.

Mr. Hale's cut is estimated at 4 million.

Mr. Layton also 4 million.

Mr. A. Gibson will take out 40 million, all by contract.

Messrs. R. & H. Stewart, *per* Mr. Richards, 20 million.

MANITOULIN ISLAND.

The latest news from this island is, that lumbering goes on actively, the following parties being at work in the woods taking out logs:

Robert and J. Henry are hard at work at Mudge Bay. They have two camps started, and will take out about one million and a half.

The Providence Bay Co. are operating on the south side of the island. They will also take out about one million and a half feet.

Mr. Howard, of Mindemoya Lake (steam mill) is taking out a small quantity for local purposes.

Sandford Mills, on Lake Manitou, are also taking out a supply for local use.

The mill at Gore Bay will get out enough for local supply.

The Toronto Lumber Co., Michael's Bay, (R. A. Lyon, manager), are the heaviest operators. They will take out about five million feet this winter. They have three camps under way at present. The location of those mills is central and convenient for shipping to any point, either south or west. Their business last season is said to have amounted to over $70,000, The lumbering business has tended largely to settle up the island, which has increased in population 15,000 during the past eight years.

A large business is done from the island in cedar ties, for the Chicago market—200,000 will be taken out this winter at the south side of the island, and a large quantity of cedar paving timber, being pieces eight long and not less than five inches at the top.

THE UPPER ST. JOHN.

From Aroostook, on the upper waters of the St. John river, we learn that operations in getting out logs will be largely increased this winter. An exchange says,—The demand for lumber in the United States and other markets, is much improved, and operators feel encouraged to proceed. Where last year one individual cut 2,000,000 ft. of logs, this year five or six operators will cut from 5,000,000 to 10,000,000 ft. This increases the demand for labour and causes a rise in price; it will result in enlarged prices for hay, oats and etc., in Aroostook. Those persons that are hiring men here now pay $5 more per month for labour than they did last year. Pork is an article largely consumed in the woods. Operators are buying pork now at the present high prices, which have been put on the article by the recent "corner" brought about by speculators. The fact will of course increase the cost of getting out the lumber above that of last season. Spruce deals are now selling in St. John for $12, and an extra quality brings $12.25, where last year the prices were $7 to $8 and even lower. The present high rating of deals is owing to the fact of large numbers of vessels being at St. John wanting freights. There are now no logs for sale, as the surplus logs are in first hands.

NIPISSING DISTRICT.

Lumbering operations are going on briskly both on the north and south shores of Lake Nipissing, and preparations are being made by A. P. Cockburn, Esq., to build a steamer for the purpose of towing, as well as for passenger traffic. The new steamer, to be named the *Interocean* is designed by Mr. Chaffey, of Toronto. She will be provided with double engines and a twin screw, and will be of about 150 horse power. The equipments will all be first class, as Mr. Cockburn has had experience in building several steamers. Some of the fittings have already been sent out. The heavier portions of the machinery will arrive by the first through train of the Canada Central Railway, which is expected to reach the east end of Lake Nipissing by July next, by which time the hull of the new steamer is also expected to be ready. Mr. Cockburn was out at Lake Nipissing lately, and has chosen where the steamboat landing wharf will be. The *Interocean* will run up Sturgeon River as far as the first falls, and French River to Chaudiere. Mr. Cockburn deserves great credit forhis pioneer enterprise. The engines and machinery will likely be furnished by Mr. Doty, of Toronto, as the improved engine he put in last season in the steamer *Rosseau* has given good satisfaction.

Tree Planting and Raising.

Those who are interested in forestry will be glad to know that many of the seeds of valuable timber and ornamental trees ripen during the months of September and October, amongst these may be mentioned the horse chestnut, the birch, the ash, the oak, the butternut, the black walnut and the sweet chestnut. It will be well, therefore, for those contemplating the rearing of a large quantity of these from seed to be on the look out during the present month for suitable trees to gather seeds from. The seed should be planted so soon as obtained, and for that purpose ground ought to be at once prepared to receive the nuts and seeds. The planting should be made in rows of a sufficient distance apart to admit of the hoe being used between them, and the soil should be made rich and light by being well and deeply worked. A generous treatment of the soil for the seed-bed cannot be too strongly insisted upon.

Trees of medium age should be selected to gather seeds from as those taken from trees which are too young often prove barren, whilst those from trees of a mature age frequently furnish plants of weakly growth. Nuts and seeds such as ash often refuse to germinate until the second year, so that all hope should not be lost if the first season's crop should not prove a success. So soon as the leaves have fallen and the wood is well ripened, cuttings may be made of the various kinds of willows and poplars, these should be made about eighteen inches long of the present year's shoots, and inserted one foot in the ground. The great success in growing all cuttings is to have the earth firmly deposited at the base of them, and for this purpose the trench in which they are set should be only partially filled and the soil pressed down with a suitable instrument, and then filled up tightly, a piece of slat or board six or eight inches wide and two inches thick, sawn squarely across one end and tapered to a handle at the other makes a handy implement for setting all kinds of cuttings. The cuttings should be planted from six inches to a foot apart, in rows, so as to allow the hoe or cultivator to pass freely between them from two to three feet between the rows would be found a suitable distance both for cuttings and seeds. It would be well if more attention were given to nut bearing trees, amongst which are some of the best for timber, and the handsomest for shade and ornamental purposes, and the fact of their bearing nuts should be no detriment to their being cultivated. Who cannot recall the days of his youth when he sat over the winter evening fire cracking his nuts and chaffing his girl? But the nut bearing trees are getting scarcer as the evenings grow longer, and now there are fewer nuts to crack than formerly; but there is no reason why the rising generation should not have quite as much innocent amusement as their fathers had before them, if only a little judicious forethought was exercised. Most of the nut bearing trees grow rapidly. The writer has seen a growth of six feet made by a black walnut since last spring, and a growth of this length is no unusual sight on young butternut trees. The writer has some young plants of this variety, the nuts of which he planted seven years ago. The trees had catkins on them this spring but did not bear. He has no doubt they will be productive next year. These trees have been twice and three times transplanted, and for the last few years have been growing in a heavy lawn sod, so that although the soil was good the experiment was not on the whole favourable to the rapid growth of the young trees. The wild sweet chestnut, whose fruit though small is of excellent quality, is a very rapid grower where soil and climate are congenial, and will stand the winters very well along the St. Lawrence river front as far east as Cornwall, and is very suitable for planting all over the western peninsula as far north as Owen Sound. The timber of this tree cannot be excelled for furniture, and is chiefly used as bed-room sets. It has a fresh light and neat appearance when oiled and varnished, which brings out its large open grain, and its peculiar rich yellow hue gives it a cheerful appearance. A firm in Detroit manufactures from this wood very largely.

We would recommend the raising of all nut bearing trees from the seed, and transplanting them to their permanent position when from four to six feet high, as these trees are not considered as a rule so easily removed as the seed bearing varieties. Although we know of some set out at 10 to 12 feet high with very great success, but they had been root pruned and re-set before. We believe any one wishing to obtain nuts of the black walnut, or young trees, may get an almost unlimited quantity at a trifling cost from Chief Johnson of the Six Nation Indian reserve at Brantford. This is now the right time in the year to secure nuts, which should be planted as soon as obtained It would be well for our experimental farm to produce a couple of bushels for planting, in order to shew the general public how readily they can be grown, and with what rapidity the denudation of our forests can be restored. The variety, date of planting, etc., should be kept on a stake at the end of the row so that visitors could see at a glance the progress made from time to time.—*National.*

Horse-Meat as Food.

From the Parisian.

Some very interesting statistics have been published by the society for promoting the use of horse-flesh and the flesh of asses and mules as food, showing how steadily the consumption of these articles of diet has been increasing in Paris and the Provinces since the foundation of the society in 1866. The weight has increased from 171,300 pounds in 1866. to 1,982,620 pounds in 1879. In the principal cities of the Provinces the consumption of horse-flesh may be considered to have fairly taken root. At Marseilles, in 1870 there were 599 horses eaten; 1,031 in 1875 and 1,233 in 1878. At Nancy, 165 in 1873, over 350 in 1876, and 705 in 1878; at Rheims 591 in 1874, 423 in 1876, and 834 in 1878; at Lyons 1,839 in 1873, and 1.313 in 1875. In both the latter cases some difficulties had been thrown in the way by the town authorities, as was the case recently at Chalons-sur-Marne, where the Mayor fixed the price of horse-flesh at a higher rate than that of beef. The average price of horse meat is from 25 to 30 cents per pound. Each horse furnishes about 200 kilogrammes (400 weight) of meat, which is capable of being prepared in many by no means unappetizing ways. Such as *pot-au-feu* boiled, roast, hashed, haricot, jugged, filet &c.

A Successful Case of Transfusion of Blood.

The following case, which exhibits in a marked degree the beneficial effects of transfusion of blood when performed in cases of impending death from excessive hemorrhage, is reported in the New York *Medical Journal*, for August, 1880, by Joseph W. Home, Mr D. :

Mrs. B., aged twenty-two years, was delivered of a three months' fœtus, November, 7, 1879. From that date until November 11 she had repeated and profuse hemorrhages from the uterus. On the 10th the bleeding was continuous. Drs. Reynolds and Comstock, who were first called in, succeeded in controlling the hemorrhage, but not before the patient had reached the stage of collapse. They remained with her all night, endeavoring, with the ordinary means of stimulation, to rouse her, but without avail. She continued to sink in spite of everything.

On the morning of the 11th I was sent for. The patient was then completely pulseless and partially unconscious. The extremities were cold and clammy, and it was evident that unless some fresh blood were introduced death would soon supervene. She was so far gone that I made up my mind not to spend any time in defibrinating the blood. I opened the median basilic vein in the right arm of the patient and introduced the closed cannula of Colin's instrument, and after passing some warm water through the cylinder of the instrument, attached it to the cannula in the patient's arm. The median cephalic vein in the right arm of the donor was then opened, and the blood was allowed to flow directly into the cylinder without defibrination. When a sufficient quantity had been obtained, and while the blood was still flowing, I injected, without any difficulty, between seven and eight ounces. The whole operation did not occupy more than five minutes in its performance.

Within half an hour the pulse returned at the wrist, the voice became clear and distinct, and she asked for something to eat saying that she felt stronger and better in everyway. One of the medical gentlemen who had been with her all night assisting in the attempts at resuscitation, and who left in the morning, believing that there was no hope of her recovery, came in an hour after the operation, and said it was "a perfect transformation scene"—that he had no idea that a few ounces of blood could restore lost vitality so rapidly.

From that time on the patient continued to improve, and when I last heard from her she was in the enjoyment of good health and attending to her household duties without any discomfort whatever.

Hose Pipe Nozzles.

Who is going to invent the nozzle of the future? There is no nozzle that we have ever seen that seems to us to control the stream it delivers as it should do. Instead of projecting a solid stream for a long distance, the water breaks soon after leaving the nozzle, and soon sprays and breaks up altogether. We often hear of steamers throwing 250 and 300 feet, but we recently heard a veteran chief say that he had yet to see the apparatus of any kind that would throw a solid stream 100 feet. The difficulty may be all with the water, which is naturally inclined to separate, but we are of the opinion that part of the trouble lies in the construction of the nozzle. An experimeat made at Boston by putting a core into a play pipe, and thus dividing the stream into four parts. depriving it of its rotatary motion, showed a gain of thirty feet in distance playing. But even this does not seem sufficient. Our steamers give us power enough for throwing, and the hose in use gives every facility for carrying a large volume of water; there should be some means devised for delivering that volume in a solid stream at long distances. Great difficulty has been found in making nozzles operate uniformly at all times. A manufacturer of steamers once found a nozzle that gave him great satisfaction; with it his steamers could throw greater distances than with any he had ever tried before. He ordered half a dozen more just like it. The half a dozen were made precisely like the first, but never equalled it in delivering water. There is much to be learned yet regarding this question of delivering water on fires, and the exact relations existing between pressure, hose, play pipes, nozzles, and the friction of water more clearly understood.—*Fireman's Journal.*

SCIENTIFIC GOSSIP.

THE Hungarian State railways are in all 1,119½ miles in length, and they yield an income of about 1⅛ per cent. per annum on the capital invested in them.

To the alteration and metamorphism of rocks by the infiltration of rain and other meteoric waters, M. de Konick, of the Belgian Academy of Sciences, assigns the cause of many hitherto unexplained phenomena in geology.

FROM the inquiries conducted by Prof. Hermann Cohn, of Breslau, since 1866, it appears that short-sightedness is rarely or never born with those subject to it, and is almost always the result of strains sustained by the eye during study in early youth. Myopia, as it is called, is seldom found among pupils of village schools, and its frequency increases in proportion to the demand made upon the eye in higher schools and in colleges. A better construction of school desks, an improved typography of textbooks, and a sufficient lighting of class rooms, are the remedies proposed to abate this malady.

THE *Electrician* tells this story : A number of gentlemen were the other day about to dine, and one of the covered dishes was especially cared for, containing, as it was seriously averred, a *gymnotus*, fresh from the rivers of South America, which was to form part of the repast. Usually, electricians scrupulously observe decorum, but the Chairman, instead of pronouncing the benediction, turned to the dish containing the eel and solemnly requested grace, when, with a sweet cadence, as if from a mermaid in cavernous regions, was heard all over the place : "Be present at our table, Lord," &c. The cover was then raised and the anticipated electric eel turned out to be a telephone, which had been ingeniously connected to a distant room, and which, being a religiously good telephone, not only produced a pleasing sensation to all present, but afterward returned thanks in a powerful but well-known voice to the admiring listeners.

THERE is no question now among the most conservative of engineers that this time the electric light has come to stay. Perhaps as yet the most extensive use of this light in any one establishment is that in the Royal Albert Dock, London, an extension of the Victoria Docks, which covers 80 acres of water space, and has nearly eight miles of quays. The lamps used are the Siemens pendulum kind, with the body of the lamp above the arc, and the carbons so regulated that the position of the arc is fixed. Each lamp is placed on the top of a pole 80 feet high, and its effective illumination overlaps that of its neighbours. To generate the electricity, the Siemens "D 2" dynamo-machines are employed, one to each lamp. The *Engineering* says that the most interesting feature of the sets of generators is that the whole of the available current generated in each machine is conveyed to its corresponding lamp, none being utilized and absorbed in its passage for exciting the field magnets. In order to do this a separate dynamo-machine, specially constructed, is employed, the current developed by which is transmitted through the magnet coils of all the illuminating machines in series. By this arrangement, the essential principles of which was first conceived and announced by Mr. Henry Wilde, of Manchester, motive power is economized and greater constancy of current is insured. It is reported that the illumination of the dock, with its quays and surroundings, is very perfect, and that the effect is most beautiful. Between the machines and the lamps the distances vary from 120 to 1,100 yards.

How did we come to possess our present form of dress? This is one of the many questions answered by a reviewer in the *Nature*, who had under his notice the catalogue of the Gen. Pitt Rivers anthropological collection lately noticed in this column. Clothing at first was almost entirely ornamental. The exceptions were such articles as belts from which instruments of various kinds could be suspended so as to be ready for use while the hands were left free. A savage does not enjoy the luxury of a pocket. Even at the present day a Japanese has to sling his tobacco pipe and pouch from his belt, and the only pockets he has are in his sleeves. The simple cincture was the germ, so to speak, of the clothing we wear. After some time a bunch of pandanus slips was added in front, and this was gradually extended until it made a complete fringe around the body. When the arts became so far advanced that man could make paper cloth or some woven material these latter were substituted for the primitive fringe, and the kilt was thus developed. Curiously enough, the dress of the Scottish Highlanders embodies these two stages of progress in the kilt and the sporran. As man advanced there were inconveniences attending the use of the kilt, which were abated by fastening that garment at one point between the legs, and the human mind was then fairly set upon the path to arrive at the attainment of a pair of trousers. When the back and shoulders needed protection the savage used the skin of some animal, and it is from this sort of covering for the upper part of the body that we have derived our coats, vests, shirts, &c. But the ancient cloak form is even yet retained, not only by such people as Zulu chiefs, but in all robes of ceremony by dignitaries of court and college of the most highly civilized nations on the face of the earth. The elaborate and varied head coverings of the present day all sprang from a very simple original type.

Scotland's First Printed Books.

(From the Pall Mall Gazette,)

If one or two of the Scots who travelled abroad in search of fame and fortune could have made up their minds to return to their native land, the art of printing might have been introduced into Scotland at a much earlier date than 1507. As it was, it took 30 years for the new practice to travel from Westminster to Edinburgh. The first printing-press in Scotland (as was stated at yesterday's meeting of the Library Association) was established in that year somewhere off Cowgate by a printer called Walter Chapman, who was employed in some capacity about the court, and was presumably permitted to set it up in payment for some services he had rendered to his patron. The first books printed were a volume of "Metrical Ballads" and "The Aberdeen Breviary," in two parts. Of the former work there is but one copy in existence; the latter was printed under the superintendence of a Bishop of Aberdeen, and four copies are still preserved, though only one possesses a titlepage. No other works were printed until 1531, but from that year to the end of the century a vast quantity of printed matter was struck off for the benefit of the nation. Most of these volumns were no sooner in existence than they seemed to have perished. We know from the wills of the printers that in many cases they left behind several hundreds of copies of particular works, although the most learned bibliographer can only now tell the *habitat* of one or two of them. What became of the rest is a question which has puzzled many minds. Possibly they were thumbed by their owners out of their lives.

Dulcigno.

The Paris *Temps* gives the following account of Dulcigno : "The town is composed of two parts, separated from each other by the port—the old town, containing the citadel, and the new town, in which the population is almost entirely concentrated, and which comprises about 400 houses. It is evident that if the squadron had opened fire it would have directed it solely against the citadel, where there are not eighty houses. The inhabitants would not have had to suffer from the bombardment. The certainty of not being in danger, even in case of military action, has, perhaps, had something to do with the obstinate resistance the inhabitants of Dulcigno have made to the cession of their town to the Montenegrins. The chief reason, however, is that they are nearly all Mussulmans; they number from 2,800 to 2,000, and it is said that till 1858 no Christian was allowed to choose his residence at Dulcigno. Lastly, it is said that the Mussulmans are a race of pirates, who have only given up piracy since 1815—that is, since Austria has had possession of Dalmatias and has created a navy.

A LONDON tailor has invented "the united suit," which consists of a man's complete attire in one garment.

THE Russian traveller Remiaowitch-Dantschenko, has discovered on the highland of Daghestan a tribe resembling Cossacks, but following the Mosaic law strictly, and retaining ancient Jewish names—undoubtedly one of the lost tribes.

THE number of yearling thoroughbreds from the great breeding establishments of England sold during the past year aggregated 451, the progeny of 112 sires. They realized 89,996 guineas—a decrease in the amount paid to breeders of 41,773 guineas as compared with 1877, when 486 yearlings brought 131.666 guineas.

A Revengeful Owl.

A remarkable instance of intelligence shown by an owl in conceiving and carrying out a project of vengeance on a farm labourer who had destroyed a whole family of young ones before they had gained the requisite strength to take wing is related by a French provincial journal. An owl had built its nest in an old oak-tree which grew near a farm in the commune of Beauvry. Its mate had laid during the month of July several eggs, which in due time developed into a promising progeny of young birds. A farm labourer, moved by a sentiment of aversion for owls, which is common in country parts, determined a few days ago to cut short the lives of the young ones, and choosing a favourable opportunity, put his project into execution. The infant owls were taken away from the maternal nest and massacred, but by what followed it will be seen the parent birds did not allow their tragical fate to remain unavenged. On several evenings succeeding that during which the nest had been plundered, the villagers returning from the fields remarked the male owl flying in an agitated manner round the farm, but no attention was paid to the circumstance, which was put down to a lingering attachment on the part of the bird to the spot where the nest had been. The event proved, however, that it haunted the neighborhood of the oak-tree from an instinct of revenge, and was lying in wait for the destroyer of its family. During a whole week it hovered near the farm, biding its time, and at length the right moment arrived. The young man who had so ruthlessly exterminated the brood of owls was crossing the threshold of the farm at dusk when the bereaved bird swooped down on him from the tree where it was keeping watch, and with surprising swiftness tore out his eye with its claws. The intolerable pain caused by this sudden attack made the victim of it swoon away. When he recovered consciousness, and had his wound dressed, he related the circumstances under which he had received it, and a search was instituted to discover whether the owl was still lurking in the vicinity. No traces of it were, however, to be found; but the young man will have reason to remember the lodger in the old oak-tree, since for rest of his life he will have to make one eye do duty for two.

Bessemer Steel.

The London correspondent of the Manchester *Examiner* says : "The city of London has to-day done itself honour in conferring its freedom upon Sir Henry Bessemer, whose name certainly deserves to rank among those of most illustrous men who have signed the roll. Sir Henry is best known by his great invention for making steel, but how busy he has been in other directions may be understood from the fact that there are no less than 114 patents which have been taken out in his name. How valuable his steel process is we already know, but nothing could explain the extent of the revolution which his invention created better than the figures which he quoted this afternoon. When the invention was introduced into Sheffield the entire make of the steel was 51,000 tons per annum, whereas last year it was no less than 830,000 tons or more than 16 times the former produce of the country. The difference in price is still more wonderful. This year he estimates that 2,000,000 of tons of steel will be made in Europe and 1,000,000 tons in England, at a cost of £30,000,000, whereas, under the old process it would cost £150.000,000. The man whose genius has effected such enormous good to the community is entitled to to take a high place on the roll of national benefactors, and the city may well be proud to have him among her freemen.

THERE are two different ways of conducting stock business out West. The one is to buy young steers, keep them two years on your range, and sell them as four-year olds. Per head the increase in value varies between $10 and $15, thus enabling the ranchman to double his capital in a short time if his losses do not exceed five per cent. and he has luck. The other method is to raise stock, buying Texan, Oregon, or Utah cows and the necessary number of Eastern or English bulls. This, if you make up your mind not to sell a single animal in the first three years, is in the end more profitable than the feeding up of stock. At first few men went into it, the capital needed being large, but as in the last few years the larger profits of the business became known it is the favourite with men tempted by the chance of making a fortune in five or six years.

The Island of Madeira.

One of the principal drawbacks to Madeira is the difficulty of getting about. There are no carriage roads, and the horse tracks are steep pitches up and down; they ere also almost invariably paved with hard pebbles. This renders it impossible to ride anywhere except at a foot's pace, so that the time consumed in going a few miles is very great, and the mode of progression very tiresome. On the other hand, the island ponies, shod in a peculiar manner to encounter the aforesaid roads, are usually sure-footed and good walkers, so that within a certain distance of Funchal pleasant expeditions are to be made if you find the time and strength. Thus the fine mountain scenery of the Grand Corral—a gloomy gorge, into which you look down some 2,000 feet or so from the mountains overhanging it—the Ribiero Frio, and other landscapes beautiful of their kind, can on well-chosen days be visited without much difficulty. To get further afield is not so easy. There are but few tolerable hotels in the country districts, and you never can be sure that you will not find the higher levels wrapped in mist or drenched with rain, even whilst fine weather is prevailing. I am speaking of the winter months; anybody who happened to pass a summer in Madeira could visit all parts of the island readily enough.

The remark that there are few comfortable inns out of Funchal does not apply to Santa Cruz (Santa Cruz in Madeira, I mean). The hotel there belongs to a Senhor Gonzalez, but is mainly upheld by the untiring exertions of a worthy woman called Maria. She is a Portuguese by birth, but speaks English quite well, and is indefatigable in her efforts to please. This quiet inn is a pleasant change from the hot tables d'hotes at Funchal; the village may be perhaps somewhat cooler, and is said to possess a lighter and finer air; it is also well situated as a place to make excursions from. A mile or two beyond it lies the well-known Machicho Bay, where, according to the tradition, Madeira was first landed upon by the Englishman Machin. The story is that this Machin, an English esquire, incurred the resentment of a powerful family by gaining the affections of the daughter of its chief. He was thrown into prison, but escaped, and then persuaded the lady to elope with him to France. A violent storm drove their vessel for thirteen days in a southerly direction, and at last they found themselves in a small brig on the shores of an unknown island. Here they landed, but the fatigues of the voyage had exhausted the strength of Machin's companion, Anna d'Arfet; she died there, and was there buried. The fragments of a cross erected over her grave are still shown by the Machico villagers. Her lover did not long survive her, and his companions, in their attempt to sail away home, fell into the hands of the Moors. During their captivity they spoke of this island to an old Portuguese pilot, who, on being ransomed, and returning to his own country, suggested and accompanied the first expedition to Madeira, which thus became a dependency of Portugal. Skepticism, of course, has been at work upon this old national tale, but there seems no reason for rejecting the legend, except that it is a legend, and that the fashionable wisdom of the hour pronounces, as usual, anything which has long been a matter of popular belief to be of necessity incredible; otherwise the narrative hangs perfectly well together in all its parts, and, moreover, furnishes a reason why the Portuguese government sent out their expedition a little later to discover the island so reported to them—a reason which otherwise would be wanting. Beyond this bay you can proceed in a boat, along another range of rugged and lofty hills, to the supposed fossil beds at the extremity of the island: these fossils are apparently concretions of lime, which have put on the appearance of branches or roots, as the case may be. An ignorant person would believe that they had formed themselves round real pieces of wood, and that these have decayed, leaving their form to the encompassing stone; but geologists, I fancy, put this opinion aside, and look upon them as being what they are, merely in obedience to some caprice of nature; they are not, according to them, fossils at all, but merely a good mitation of fossils.

Two and a half millions of tropical oranges were received in the past six months at San Francisco from the French islands of Tahiti. They have come in equal numbers every month from March to September, showing that the trees are in perpetual bearing.

The Excavation of Flood Rock, Hell Gate.

The mining of Flood Rock, Hell Gate, in the East River at the northerly part of New York city, preparatory to blowing it up after the manner of the Hallett's Point work, is being pushed forward rapidly. The expenditure last year amounted to $140,000, and a large part of the $200,000 appropriated this year for the improvement of East River will go to this work. Employment is now given to 135 men, divided into three shifts of eight hours each. The central shaft is fifty feet deep.

Running across the river are twenty headings; at right angles to these are eleven cross headings, none of which have yet been extended their entire length. They average seven feet high and ten feet wide, and are situated about twenty feet apart. Near the main shaft, however, where more light and space are required for working, they are larger. Three acres have thus been undermined, or one-third of the whole. It is not intended to enlarge the headings until each one has been carried out to its full length. Then the chambers will be widened and made higher, so that the whole excavation will resemble an immense cave, the roof being supported by the rock pillars which now form the sides of the headings. The thickness of the rock forming the roof will then be about ten feet, varying according to the character of the rock, whereas it is now from fifteen to thirty feet in thickness.

The work of tunneling proceeds very slowly, owing to the hardness of the rock of which the reef is composed. The rate at which it is now going on is from 500 to 600 feet a month, representing an excavation of fabout 1,500 cubic yards. It is impossible to tell when the whole will be accomplished, even at this rate. Frequently a seam is struck in blasting which stops the work in that heading altogether, on account of the leakage. In such a case it is customary to work around the leak. According to the last report, the work done during the past year was much greater than in any previous year; 24,000 cubic yards of rock were removed, 43,000 blasts made, and 57,066 drills sharpened. The number of blasts made each night now average 150. The rock thus broken up is loaded on scows and dumped in the deep water to the south of the reef. Part of it was also used to fill up the space between Big and Little Mill Rocks, which lie to the north.

Diamond Cutting in New York.

Among the curious and interesting industrial facts brought to light during the census inquiries, not the least is the fact that the recently introduced art of diamond cutting has been so admirably developed here that diamonds cut in Amsterdam are sent to this city for recutting. Hitherto Amsterdam has monopolized the work of diamond cutting; and the aim there has been to remove in cutting the least possible weight of the gem. The American plan is to cut mathematically, according to recognized laws of light, so as to secure the utmost brilliancy for the finished stone. The greater loss in weight, as compared with the Amsterdam cutting, is thus more than made good by the superior brilliancy of the product. From the inquiries made by chief special census agent, Chas. E. Hill, it appears that the average increasing value given to diamonds by New York cutting is $5,000 for each person employed for twelve months; also, that our dealers are receiving the best Amsterdam-cut gems from abroad to be recut here and returned.

The lines of railway in the five divisions of the earth cost, in round numbers, $16,000,000,000, and would, according to Baron Kolb, reach eight times round the globe, although it is but little over half a century since the first railway worked by steam was opened between Darlington and Stockton, Sept. 27, 1825, and between Manchester and Liverpool, Sept. 15, 1830. It is shown that in France, previous to the existence of railway, there was one passenger in every 335,000 killed, and one out of every 30,000 wounded, whereas between 1835 and 1875 there was but one in 5,177,890 killed, and one in 580,450 wounded, so that we may infer that the tendency to accidents is yearly diminishing. Railway travelling in England is attended with greater risk than in any other country in Europe. A French statistician observes that if a person were to live continually in a railway carriage and spend all his time in railway travelling, the chances in favour of his dying from a railway accident would not occur until he was 960 years old.

A New Safety Sail Boat.

To the Editor of the Scientific American:

"Don't trust yourself in that craft; you'll be overboard sure." Such was the warning of a professional boatman at the barge office on the Battery, as I stepped upon a frail boat on a "fresh" afternoon. I think I know something of boats myself, and but that I knew this one to be provided with means intended to overcome the very danger against which the honest boatman warned me, I should have more than hesitated. But the pursuit of science must be deterred by no dangers, and, moreover, my pursuit in this instance was in behalf of the whole world, as represented by the *Scientific American*.

The Jane was an especially dangerous looking craft, 18 or 20 feet long, whose bottom and deck formed the sharp V-shaped edge which proclaim an entire want of bearing power, while her immense sails, main and jib, were ample for a boat of twice her dimensions. Her captain was a New Zealander, whose motions were the reverse of safety-inspiring. My own conception of the care needful under the existing circumstances had no place with him, and, but for entire faith in my ability to swim, I should never have ventured.

As the Jane shot beyond the pier head, her huge sails were struck by a blast more than sufficient for instant destruction. Involuntarily I made ready for an impromptu bath, and the boatman tauntingly called out, "What'd I tell ye?" but *only the mast yielded*. The boat came to her bearings and moved on as steadily as though impelled by the mildest zephyr. The triumph was already complete; but more was to come. Presently we were in a large seaway, and, with our good speed, a large inflow of sea water over the low and sharp bow was a matter of course. In that, also, I was agreeably disappointed. The boat, instead of carrying the weight of the wind and being thus forced *through* the sea, rose to it and she glided easily *over*. Again it was the mast that yielded—yielded to the motion of the boat as easily as before it yielded to the force of the blast. The surplus force of wind, instead of racking the boat and making misery for her passengers, was simply "spilled" over the top of the sail. The motion was free from the thumps and jars usual under the same circumstances.

How all this was accomplished may be difficult of explanation without the aid of an engraving. Instead of being "stepped" in the usual way, the mast was held in a rocking shaft at the deck, and to the keel, on either side, springs were attached, having their opposite ends secured under the deck. Thus the mast, in the absence of pressure, remained upright, but under pressure yielded on either side. The amount of pressure needful to compel this yielding was regulated by nuts and screw on a guide rod inside the springs. A second pair of springs, placed longitudinally under the deck, were connected by pulleys with the shrouds, and these aided to stiffen the mast while they yielded to its movements under pressure.

For pleasure boats, this spring mast is a great addition. It not only insures safety, but gives an ease of motion which cannot but prove especially delightful to those who are timid upon the water. More than this, it permits an unvarying course for the boat, and thus avoids the checks and delays inseparable from "luffing," as also the necessity of unusual skill and care in the management of even a "crank" vessel in a "flowy" wind.

M. S. B.

New York, October, 1880.

[The invention, a practical trial of which is above described, is that of Mr. John McLeod, Hill's Pavilion, Flushing, N. Y. A patent has been allowed. It appears to be a really valuable and practical improvement.—Eds. *Scientific American.*]

Gold in Arabia.

The official journal of the vilayet of Yemen, Sana, announces that a gold mine has been discovered in the Sana district, and, in the usual style of Oriental expansiveness, declares that this mine "is one of the richest in the world." A detachment of soldiers has been sent to guard the place against the attack of Bedouins, and a commission has been appointed to examine and report upon the mineral prospects. A productive gold mine would be a useful acquisition just now to the Turkish Government.

The Hibernian Bible Society has circulated in Ireland, since it was formed, nearly 4,5000,000 copies of the Bible.

The Pocket Handerchief.

We may forget our purse, our penknife, and many other things, says the London *Hatter*, without experiencing any great inconvenience, and even without its being known at times, but to lose or mislay the handkerchief, may be followed by very grave consequences, as we all know. Moreover, we make use of this article in many other different ways. All who make use of spectacles do not remove them from their nose in order to put them very carefully into the case without using the handkerchief, and they use it again before putting them on, wiping the glasses with great care. The majority of people pay by far too little attention to an object so indispensable. Many put it into the same pocket with their keys, their purse, their snuff-box, without troubling themselves concerning the many strange substances with which its tissue will not fail to come in contact in so miscellaneous a company, and which might sully the purity which the handkerchief ought to possess. Does one go to pay a visit? Before presenting themselves to the person they wish to thank or solicit, some have been known to dust their boots with the handkerchief. Does the careful wife see some grains of dust left on her ornaments? She makes them disappear with her handkerchief. Boys in the school room clean their slates with them; in the playground their handkerchief is the necessary attendant of a multitude of games. With this they wipe of the dirt; they strike off the dust. It is used to stop the blood that flows from wounds—always very numerous in the age of leap-frog and prisoners, base; the age also of communism in handkerchiefs. With wounds come tears, and the handkerchief, full of dust, spotted with dirt, with the blood of bodies known or unknown, serves again for wiping the eyes, the nose, or the cheeks furrowed with tears. We do not wish, and we cannot tell here all the strange uses that people make of the pocket handkerchief. And then what signals have been conveyed by it! How many sad farewells, how many cheerful congratulations!! The very method of waving it has a language, as the motions of the fan also have. But no one has hitherto discoursed on the language of the pocket handkerchief. And how useful it often is as a help to the pocket or the hand-bag! How many mushrooms, myrtle-berries, strawberries, and raspberries have been gathered into the handkerchief in young days, and more valuable things in later life! Then there may be evil results traced to it—a number of ailments of which one cannot guess the origin; diseases of the nose and eyes. Fortunate it is for him that incurs nothing worse; diphtheria, for example, which the handkerchief may heedlessly transmit. Let us not use the handkerchief except for its proper purpose; let us devote to it a special place; let us change it as often as possible, and inspire our children with a great disgust for another's handkerchief on account of the disagreeable, nay, dangerous consequences that may ensue. Much more might be said about the pocket handkerchief, but enough has been hinted at to set my readers a-thinking upon its importance, its uses, and its abuses.

Fifty-seven tons of Greek marble have been delivered in London, free of all charges, by the Greek Government, for the Byron pedestal.

The Marquis Robert de San Marzano, who married an American, Miss Helen Gillender, has ordered in this country some things for their baby. A willow cradle has a canopy decorated with draperies, medallions, points of Valenciennes lace, and blue satin ribbon. There are sheets with tucked borders and bands of French embroidery, and others of lawn, with lace enough on them to make the cost $500 for four. An eider down quilt and some exquisitely fine blankets are included in the outfit. There are three dozen dresses in the wardrobe, many of them of lawn, mull, and fine laces. "Young mothers," says a correspondent of the Philadelphia *Times*, "can easily imagine the dainty beauty of the tiny silken socks, the exquisitely embroidered lawn skirts garnitured with the finest of fine laces, the richest of the flannel skirts with silken embroidery, and the handsome tucked, trimmed, and lace-finished petticoats, but it is difficult to conceive of anything so lovely as the robes of real lace, arranged in diamonds, medallions, squares, and all manner of conceits, with applique of embroidery in roses and other flowers, each figure in the Valenciennes lace being punched or upraised until it looks like round point."

Breeding from Arab Sires.

(The Nineteeth Century.)

As size is a condition *sine qua non* for most purposes in England, I feel that something needs to be said on that head. I have every reason to believe that pure Arabian produce, bred in England, will in the first generation reach the height of 15 hands 2 inches, although his dam is hardly that height, and I believe it to be a fact that cross-bred produce from an Arabian sire is always taller than the mean height of sire and dam. That this should be so seems to me quite accountable. The Arabian of 15 hands is not a big pony but a little horse—little only through the circumstances of his breeding, and ready at once to develop as nature, under kindlier influences, intended him to do. It may seem a paradox to say it, but I believe size to be no less a quality of the racing Anazeh than speed. The English race-horse of 1700, if we may believe Admiral Rous, was under 15 hands in height, being then, as I have shown, by no means a pure Arabian, whereas immediately after the infusion of Darley blood he rose to 16 and 16.2. The soil and climate of England will, I doubt not, do now what it did then, and I think it is the Duke of Newcastle who remarks, "There is no fear of having too small horses in England, since the moisture of the climate, and the fatness of the land rather produce horses too large." Neither do I doubt that in Arabian cross-breeding a like result will be obtained. Lastly, the Arabian has this in his favour as a sire. He is less likely, from the real purity of his blood, to get those strange sports of nature which are the curse of breeders, misshapen offspring, recalling some ancient stain in not a stainless pedigree. The true Arabian may be trusted to reproduce his kind after his own image and likeness, and of a particular type. It will rarely happen to the breeder of Arabians that a colt is born useless for any purpose in the world, except, as they say, "to have his throat cut or be run in a hansom." Whether he be bred a race-horse or not, the Arab will always find a market as long as cavalry is used in England or on the Continent. He is a cheap horse to breed, doing well on what would starve an English thoroughbred, and requiring less stable work from his docility. Above all, whatever diseases he may acquire in time, he starts now with a clean bill of health, inheriting none of those weaknesses of constitution which beset our present racing stock. He endures cold as he endures heat, fasting, as plenty, and hard work as idleness. Nothing comes to him amiss. For what other creature under heaven can we say so much?

The Teeth of the Ancient Greeks.

(From the London News.)

One of the most remarkable features of the discovery of the band of Thebans who fell at Chæronea is that, according to the report, all the teeth of each member of the Sacred Band are sound and complete. Either these gallant patriots were exceptionally lucky, or the condition of teeth in old Greece was enviably different from that of later and more degenerate days. The Romans were well acquainted with the evils that attend on the possession of teeth, and had some considerable knowledge of the use of gold in counteracting these evils. If we remember rightly, an exception to the rule of not burying precious objects with departed Romans was made in favour of the gold that had been used for stopping teeth. We moderns may compare favourably with the Romans in the skill of our dentists, but we cannot pretend to rival the defenders of Thebes in their superiority to the necessity for these gentlemen. Rare, indeed, are the happy mortals of to-day who can truly boast that their teeth are in the perfect condition that nature intended, and that the craft of the dentist has never been employed upon them. It would be a difficult task to select from our Army, or any modern army, 300 men with teeth as sound as those of the Theban warriors are reported to be.

Two marble busts of the Prince Imperial have lately been finished by Mr. Best, the sculptor, one for Queen Victoria, representing the cadet at Chiselhurst, and the other for Gen. Simmons, which is to be presented to the Royal Military Academy, at which the ill-fated youth studied. It is said that the Empress will have the bodies of her husband and son brought to wherever she may pitch upon for her residence, and placed in a mausoleum there. She is in very delicate health.

SCIENTIFIC GOSSIP.

In the first of the series of his Cantor lectures, Robert W. Edis thus concisely states how decoration and furniture of town houses should be treated: "The great aim of the designer should be simplicity and appropriateness of form and design, with harmony of colour, and to show that the cheapest and commonest things need not be ugly, and that truth in art and design need not of necessity involve costliness and lavish expenditure. Fitness and absolute truth are essential to all real art, and be it remembered that 'design is not the offspring of idle fancy; it is the studied result of accumulative observation and delightful habit;' and by a careful regard to this we may make our homes and habitations, if not absolutely shrines of beauty and good taste, at least pleasant places, where the educated eye may look around without being shocked and offended by gross vulgarity and gaudy commonplaceness."

By means of an ingenious clock-work apparatus, Marey, the French biologist, has obtained a number of exceedingly interesting graphic illustrations of the manner in which man walks. The instrument is a vertical barrel, covered with finely ruled paper, and as the barrel is made to revolve by the gearing within it, a little pencil makes a mark on the paper, as the person whose walk is under investigation steps along with the registering device. A little air-compressor, worked by the foot of the walker at each step, sends a current of air through a flexible pipe to the instrument, and gives a more or less up-and-down movement to the pencil. It has been found that the step in going up hill is longer than in going down hill; that the step is longer for an unburdened man than for a burdened one, and that the step is longer when the sole of the boot is thick and prolonged beyond the toe than when it is short and flexible. When a person ascends a hill he quickens his pace, but diminishes its length, and he does just exactly the opposite when descending an inclination on the ground. It would seem that Marey's observations point to the advisability of pedestrians in general adopting low-heeled boots, with thick projecting soles.

The *Chemical News* gives the following pertinent piece of advice to the young student of science in Great Britain, and neither young nor old students on this side of the Atlantic need evade reading it at least. When a man has got so far as to define, even in his secret thoughts, science as a mere something to be examined in, he is intellectually dead. In conjunction with this caution we must make a demand upon the moral nature of the student. We must exhort him, at whatever cost of time and labour, to eschew cram, including under the term all the tricks and dodges by which a really undisciplined mind is made to put on a false appearance of mastership. It is not safe to argue that the English system of examination being essentially a sham it may be legitimately evaded. He who wins degrees and diplomas by deceit will have acquired habits of dishonesty which will cling to him in after life, and which will manifest themselves in a propensity for trimming and cooking results, for suppressing inconvenient facts, and forging evidences for a tottering theory. He who cheats examiners in youth will in after life be apt to cheat scientific societies and the learned world at large for his own glorification, and may perhaps for a time succeed.

The Tower of Silence.

On a hill in the island of Bombay (called by the Europeans Malabar Hill) stand, all within a short distance of each other, the churchyard of the Christians, the cemetery of the Mussulman, the place where the Hindoos cremate their dead, and the Tower of Silence, where the Parsees leave theirs uncoffined, to be devoured by the birds of the air. It is a lofty square enclosure, without roof or covering of any kind. Huge bloated vultures and kites, gorged with human flesh, throng lazily the summit of the lofty wall surrounding the stone pavement, which is divided into three compartments, wherein the corpses of men, of women, and of children are laid apart, and all nude as they came into the world. Some relative or friend anxiously watches, at a short distance, to ascertain which eye is first plucked out by the birds, and from thence it is inferred whether the soul of the departed is happy or miserable. The Parsees regard with horror the Hindoo method of disposing of the dead, by throwing the bodies or ashes into rivers; yet their own custom is even more repugnant to the feelings of the Europeans in India.

FACTS AND INCIDENTS.

The Swiss pleasure season has been the best for six years. Up to June 30 the Lucerne Steamboat Company had carried 40,000 more passengers than up to the same date last year.

A man leaped from a third-story window, in Philadelphia, to escape from his infuriated wife. His leg was broken; but that was nothing, he said, to what he would have suffered if he hadn't jumped.

Last December the London Peabody Fund of $2,500,000 had grown to $3,500,000. The trustees up to that time had housed 9,905 persons in 2,355 separate dwellings. The average weekly earnings of the head of each family in a Peabody house were $6, the average rent $1, and a single room 50 cents

Two Kentuckians had been stopping at a Chicago hotel. One of them was fiercely disputing the correctness of the bill which the clerk had just presented to him, when the other took him by the arm and said, "Colonel, never forget that you are a Kentuckian. Kill the clerk, but pay the bill."

The excitement consequent on the discoveries of new diamonds in the Free State of South Africa, according to latest intelligence, had not abated in intensity. Three new rushes have been reported. A gem of the first water, weighing fifty carats, and worth $30,000, has been unearthed at the Jagerstostein diggings.

Sir Charles Gavan Duffy's new work, on which he is now engaged, adheres to the old phrase with which he was himself identified from its inception to its collapse, and he calls his book "Young Ireland." It is not a history in broad and well-connected narrative, but a sort of personal memoir. O'Brien, Dillon, O'Gorman, and Meagher are spoken of very highly, but Michael is very severely handled.

The Swedish and Norwegian press are discussing in somewhat heated terms the agitation prevailing among a section of Norwegians for the repeal of the act of union between Sweden and Norway, and the establishment of a Norwegian republic. The Swedish journals, while hinting that the separation of Norway would be a good riddance, maintain that the honour of Sweden is involved, and that, if necessary, strong measures must be employed to reawaken the loyalty of the Norwegians. The relations between the Norwegian deputies and the King are greatly strained, the right of the King to a final veto having been denied by a large majority.

There has lately been published a very interesting official paper by Capt. Morant of the British navy, on the operations of the six vessels sent under command of the Duke of Edinburgh to give aid on the west coast of Ireland. The report says that the distress did not come suddenly on the inhabitants of this wild region by reason of the failure of last year's harvest, but was due in great measure to the falling off in value of kelp. This compelled the people to fall back upon tillage and fishing; but the crops capable of being grown are utterly insufficient to support the population, while the appliances for fishing are too imperfect to help much in sustaining the communities. The population is far larger than such a soil and climate can support, and the people have been imprudent in making very early marriages. Emigration is the only remedy for these people.

Dr. Louis Posse of St. Louis was married last July. Now his wife is suing for a divorce. Her chief cause of complaint is given in her testimony as follows: "We had a roast duck for dinner, with onion stuffing. When he saw the onions he got just like a wild man and threw down his knife and fork, cursed me and called me names, and asked me what kind of eating that was. He wouldn't sit down to the table then, but went and sat down in the kitchen. I wasn't eating then, and he asked me why I didn't eat. I said to him, "If you will not eat I will not eat either." He then said, "If you don't sit down this very minute and eat, I will show you who is boss in this house, you or I." He forced me to go to the table and sit down, and I took some victuals on my plate just to please him, but I couldn't eat. He then went and got a stick and stood behind my chair and said to me: "Here, do you see that stick? That is for you, and if you will not eat now I will break this stick on your back. I will break every bone in your body. Fill up your plate and eat." I even filled my plate for good, and he kept standing behind me till I had the whole plate emptied."

GRINLETS.

"A Terrible Infant!"

I recollect a nurse call'd Ann,
Who carried me about the grass,
And one fine day a fine young man
Came up, and kissed the pretty lass;
She did not make the least objection!
Thinks I, "Aha!
When I can talk I'll tell mamma."
And that's my earliest recollection.

They had just exchanged their rings,
And sat on the sofa together,
Discussing the subject of weather
And several others things.

It was midnight ere he rose.
And a bit of court plaster
From her cheek of fair alabaster,
Was stuck on the end of his nose.

"How is your husband this afternoon, Mrs. Quiggs?" "Why, the doctor says as how if he lives till mornin' he shall have some hopes of him; but if he don't he must give him up."

When a boy is ordered against his will to take the coal-scuttle down stairs and fill it, it is astonishing the number of articles he will accidentally strike the scuttle against before getting back.

The European powers to Dulcigno—Will you surrender? Dulcigno to the European powers—No, I won't. The European powers to Dulcigno—Then we think you're real mean—so, there!

A bright little girl, who had successfully spelt the word "that," was asked by her teacher what would remain after the "t" had been taken away. "The dirty cups and saucers," was the reply.

The following letter was received by an undertaker recently from an afflicted widower: "Sur—my waif is ded and wonts to be berried to-morrow at Woner klock. U nose wair to dig the Hole—by the siad of my two other wiafs—let it be deep."

Lawyer C——(entering the office of his friend, Dr. M——, and speaking in a hoarse whisper: "Fred, I've got such a cold this morning that I can't speak the truth." Dr. M——: "Well, I'm glad that it's nothing that will interfere with your business."

A certain English general, being at the point of death, opened his eyes, and seeing a consultation of four physicians, who were standing close by his bedside, faintly exclaimed: "Gentlemen, if you fire by platoons it's all over with me," and instantly expired.

Maj. Dunnup—Awf'lly dull down here, isn't it, Miss Maria? Miss Maria—Do you think so? Why don't you go, then? You're a bachelor, and have only yourself to please. Maj. Dunnup—Only myself to please! You dont know what a doosed difficult thing that is to do.

The Irishman had a correct appreciation of the fitness of things who, being asked by the judge when he applied for a license to sell whisky if he was of good moral character, replied: "Faith, yer honour, I don't see the necessity of a good moral character to sell whisky!"

Here is a verbatim sample of a preacher's prayer of a coloured camp-meeting at Seneca, Md., last summer: "Oh, Lord! send down thy spirit! Let down de right foot ob Thy power! Oh, Lord! mount de gray horse ob Zion, an' come down an' stir us up wid long poles."

Just as a Brooklyn citizen called his five-year-old son into the house, the other day, a playmate gave the boy a slap in the face, and he ran to his father for protection. "My son," said the fond father, "when a boy hits you like that, you must always strike back." "Oh, papa, I did. I hit him yesterday."

When old Mrs. Bunsby had got through reading in the morning paper an account of the last fire, she turned her spectacles from her eyes to the top of her head and remarked: "If the city firemen would wear the genuine hum knit stockints, such as we make and wear in the country, they wouldn't be a bustin' of their hose at every fire."

The base-ball season has ended, and the mellifluous mouthings of the umpire, as he manfully argues with the second-base man, are hushed. The arnica market is dull, and the new wing for the hospital will not need to be built for another season. The base runner has "got under" for the last time (we wish some of them had), the home plate and got a "slide," "fly" time has passed, the has only batter in the land is in the griddle-cake pan. The boys have earned this run.

THE CANADA LUMBERMAN

AND MILLERS', MANUFACTURERS', AND MINERS' GAZETTE.

ISSUED SEMI-MONTHLY AT TORONTO, ONT.

A. BEGG, - Proprietor and Editor.

TERMS IN ADVANCE (Post-paid):

One Copy one year..... $2 00
One Copy six months..... 1 00

ADVERTISING RATES

$1 50 per line per year; 85 cts. per line for six months; 50 cts. per line for three months.

Small Advertisements 10 cts. per line first insertion; 5 cts. per line each subsequent insertion.

Business Cards, Forms of Agreement, Bill Heads, &c,. promptly supplied to order, at the LUMBERMAN Office.

Communications, orders and remittances, should be addressed to A. BEGG, LUMBERMAN Office, 33 Adelaide Street West, Toronto.

TORONTO, ONT., OCTOBER 30, 1880.

"Rome was not built in a day." Our patrons will kindly bear with the LUMBERMAN, for a few weeks until fairly under way. In the meantime send in the subscriptions. We have had to write out a number of receipts and enjoy the exercise.

A NEW AND VALUABLE INVENTION.

Mr. Finlay Ross, of Byng Inlet, has invented and patented a gang of circular saws, which will probably supersede the ordinary stock gangs of upright saws. Mr. Ross can, by a simple contrivance, arrange on one mandril any required number of saws, which may be taken off at pleasure, as easily as the ordinary gang by shifting a key and coupling, placed near a pulley at each end of the mandril. The inventor claims that his gang of circulars will cut a much larger quantity of lumber than the usual gang, and that the face will be smoother. Another advantage claimed by Mr. Ross is, that as the saws are arranged so as to run *with* the grain of the timber they will cut easier and make smoother work than the ordinary circular saw revolving *against* the grain of the log. The logs are fed with press rollers in the ordinary way. There seems to be a mine of wealth in this simple invention, when fairly introduced.

A WARNING.

A writer describing the lumbering operations on the Penobscot river, State of Maine, refers to the City of Bangor, at the head of navigation on that river. He says, Bangor contains between 17,000 and 18,000 inhabitants, and it never can grow larger. In the past it has been noted for its immense lumber trade, but now that business is rapidly coming to a close. Up to 1872, lumbering was carried on briskly at Bangor,—now a large number of saw mills have discontinued operations, and the humming of saws, the puffing of tugs, the rafts of logs and the crowds of lumbermen which once frequented them, are sights and sounds which are seen and heard no more. Here was a region settled in the latter part of the 18th century, and lumbering had been its chief industry for about 50 years. The axe of the lumberman and the saw of the mill had done their work in depleting the forests of their grand old trees.

The river, for miles, was lined with saw mills. These mills so filled with animation, so lucrative to their proprietors, are now gone into disuse. The haste and waste, with which the forests were cut down and the timber sawn into lumber, compelled the abandonment and brought the growth of the city of Bangor to a standstill.

THE MINERAL WEALTH OF CANADA.

In every Province of the Dominion, discoveries are frequently being made of gold, silver, and a host of economic minerals. Nova Scotia has for years been celebrated for its gold bearing quartz. The latest special item from that Province is that a fine bar of gold from the Yarmouth Greenpot mine has been shown to a St. John *Telegraph* reporter by Mr. Henderson, the secretary of the company. It weighed 42 ounces—four ounces less than the last specimen from that mine exhibited, but is much purer—and is worth in the neighbourhood of $800. The company intend shortly putting in machinery that will crush fifteen tons a day instead of three as at present; this can be done at but trifling cost, and with but few additional hands. The prospects of this mine are said to be excellent.

The Halifax *Mail* says.—The Tangier gold field is being rapidly developed, and promises to be one of the richest in the province. A few days since a son of Mr. Timothy Archibald, who owns and runs the line of stage-coaches that runs to the eastward, discovered a lead near Salmon River, in the Tangier district, which is thirty-three inches in width, and from the indications given by boulders on the surface, and by quartz taken just below, will prove of unusual richness. A company has been formered to work the new mine, and operations will be vigorously pushed. Another lead, thirty-six inches wide, has also been recently discovered in the same district. Surface samples that have been taken out, crushed, and assayed show an average yield of ten pennyweights to the ton. A handsome brick of gold, valued at $1,100, was shown us to-day. It was taken from the mine at Moose river, owned by Messrs. J. R. Johnson and W. G. Cole. This mine is yielding very fair returns, and this last crushing is the result of thirty days' work for five men.

From Pictou six thousand and twenty tons of coal were shipped last week, making the total shipments to date 231,708, Following are the figures:—Halifax, 171; Acadia, 1,106; Intercolonial, 2.259; Vale Co., 2,482; total 6,020. Total to date—Halifax, 86,202; Acadia Co., 46,791; Intercolonial Co., 49,627; Vale Co., 46,082; total 231,708.

Word comes that the Lake George, N. B., Antimony Mining and Smelting Co. have struck a large vein of silver ore, the specimens shown being very rich. This mine is employing from 25 to 50 persons, and has made two shipments of very pure ore to Great Britain lately; and that Mr. Hibbard's mine has been sold to the Hibbard Antimony Mining Company for $200,000, one half paid in cash and the other half in the stock of the company.

A large mineral belt has been discovered in Cape Breton, between Marble Mountain and Malawatch, in which gold, silver and copper are found.

In the Province of Quebec, the discovery of a gold nugget weighing six ounces is reported from the Delery concession, River Gilbert. Mr. Delery has formed a new company to work the precious metal, under the name of the East Branch Gold Mining Company. Copper mining is also profitably carried on in the Province.

A glance at the Ottawa Valley shows, according to a sketch recently furnished by Mr. Garret, a trust-worthy geologist residing at Ottawa, that a very large number of economic minerals are found in that valley. He first refers to Apatite (phosphate of lime) which is found in abundance in that region, and as an economic fertilizer has developed itself to such an extent as to claim the rank of a staple and indispensable mineral. Year by year it continues to be developed, and the promise for the future is bright and substantial.

Felspar is abundant. Mr. Garret thinks, that as the grey variety which is important in the manufacture of porcelain chinaware, manufactures might be established with profit, for the production of ceramic materials.

Plumbago, in large deposits has been discovered and worked. The ores are rich in pure and "dissimated" quality. Liberal capital, labour and patience have been expended to carry forward this valuable enterprise, to perfect the manufacture, and it is acknowledged, in pencil work particularly, equal, if not superior to the best European stock.

Molybdenum—a new species of graphite was recently discovered in the County of Renfrew and is now being brought into a commercial position for export. The market is limited and only for exportation, at $1, 000 per ton. Its proclivities for location is mostly confined to the neighbourhood of iron and plumbago.

Mr. Garret, also mentions as products of the Ottawa Valley, nickel, (oxide), manganese, baryta, (sulphate of lime), asbestos, bog iron ore, iron pyrites, antimony, celestine or stontia, copper, iron ore. silver, gold, soap stone, syenite, or granite, mica, marble, peat, and marl. Mining in the Ottawa region gives employment to a large number of men.

Iron mining is becoming a large industry in Madoc, Marmora, and further westward in the range of townships extending toward Lake Superior.

Gold has been discovered near Perth, which yields $128 to the ton. The mine is situated on a lot of one hundred acres, about seventeen miles from the town, and is the property of W. Hicks, who, with several other gentlemen, are arranging to develope it.

The lake Superior region is well known to be rich in silver, gold and copper.

From the region near the Lake of the Woods, it is reported that Mr. E. Faye, an engineer lately in the employ of the Pacific Railway has found specimens of rich gold bearing quartz. Some of the nuggets were as large as peas, while in much of the quartz the "flower gold" showed the glittering particles profusely all through. Mr. Faye reports the discovery of silver, copper and asbestos. The mineral is found chiefly on the rocky islands, which are interspersed throughout the lake.

Those discoveries were made near Rat Portage. Mr. Faye has obtained 25 cents' worth of gold from three-fourths of a pound of ore, which is equal to $666 per ton, and there is every reason to believe that the gold mines in the that section will pan out fully as well as its discoverers are led to believe.

In the North-west Territories coal is found in abundance; and towards the Rocky Mountains, gold in sufficient paying quantities has been already obtained. Passing on to British Columbia—that Province is rich in gold, silver and other valuable minerals.

When to this is added our salt and petroleum springs, it is evident that the Dominion of Canada has, within itself, enough mineral wealth which only needs development, to add immensely to the producing industries of the country.

NOTES FROM GEORGIAN BAY.

Last week we intended visiting the saw mills at Midland and vicinity before they closed down for the season, but found that time did not permit the trip to be extended farther than the Waubaushene and Severn mills. The latter mills closed on Thursday, the 21st inst., to allow the men to go to camp for winter operations. The past season's work at the Severn mills has been satisfactory. There is yet on hand in the mill yard about 6 million feet of lumber. Probably about 3 million feet of this will be transferred to Waubaushene docks before the close of navigation. The Waubaushene mills were in full operation, and likely to continue at work for two weeks yet or longer, as a further supply of logs is expected. The mills are situate at the mouth of Matchedash Bay, on the Midland Railway, which has six tracks running through the mill yard, and a leading track extending along the dock, where barges unload lumber intended to be conveyed by railway from the Severn mills, about four miles distant. This extensive and complete establishment, which gives employment to over 150 men, during the summer season, is a pattern of neatness and convenience. A church and schoolhouse have been erected by the Company (Hon. W. Hodge & Co., New York,) for the accommodation of the workmen. Similar accommodation is provided by the Company at the Severn mills, which also gives employment to over 150 men. The Company have also erected a large building, with 26 bedrooms, for the use of parties having business to transact at the mills, as well as for transient travellers. This is named "The Dunkin House," which, as its name indicates, is a temperance hotel. The temperance principle extends over the whole Company's works, it being a stipulation with employees, when engaged, that they shall abstain from intoxicating drinks while in the Company's service. The present landlord of "the Dunkin House," is Mr Perkins, measurer and culler. He keeps an excellent house, at the ordinary charge of $1.00 per day.

It may be noticed here that the Waubaushene establishment is head quarters of several extensive saw mills on the East coast of the Georgian Bay, incorporated about ten years ago, at the instance of the Hon. Mr. Dodge, of New York, and others, under the names of the Collingwood Lumber Co. (at present under the management of Mr. D. G. Cooper;) the Georgian Bay Lumber Co., (including the Waubaushene and Severn Mills, under the management of Mr. T. W. Buck;) the Parry Sound Lumber Co. (mills at Parry Sound, since sold to J. C. Miller, Esq.,) and the Maganetawan Lumber Co., under the management of Mr. J. H. Buck. The general supervision of the whole concern is vested in Mr. T. W. Buck, Waubaushene, who has proved himself a very capable manager. We had not the pleasure of seeing Mr. Buck on this trip.

Besides the powerful propeller Maganetawan and the tug Hayes, the Company have a handsome steam yacht, which when in port is protected from the weather by an enclosed shed built alongside the dock. Preparations are being made to have another steam tug, 90 feet keel, built this winter.

Each establishment belonging to the Company is provided with a well-appointed machine shop, so that everything is kept in the very best repair. The manager's residence—a handsome mansion—is built on a rising ground, a short distance south, commanding a complete view of the bay and mills. The office and general store are near by the mills, and together with the workmen's residences, make quite a village, Every branch of the work is thoroughly systematized, so that, for instance, if a sale of lumber is made, the manager can tell, from the reports sent in to him, where a certain pile stands, its quality, etc., without leaving his office.

To give some idea of the extent of the business done at this place, it may be stated that one day lately there were one hundred and six cars of lumber and square timber in the yard consigned to points over the Midland Railway, principally for eastern markets.

Wages during the summer range from $25 to $35 per month—paid, the workmen say, promptly and regularly. In the woods at present, wages range from $15 to $18, so that the rate during winter, with board, is equal to the summer rate, without board.

Towards Midland, along the railway, are Tanner's mills and Christie's mills, each of a capacity of turning out 25,000 to 30,000 feet per day, and Power's mills,—capacity 75,000 feet per day.

On the Midland Railway, towards Orillia, is Mr. Ross's mill, at Fesserton, about two miles east of Waubaushene. This mill has a capacity of about 25,000 feet per day.

At Coldwater is the shingle mill of Mr. Lovering, and that of Messrs. Hall & Co. They turn out a large quantity of shingles each year.

At the Alma station, another mill ha just been put up by Messrs. Wyley & Tait. When it is completed, which it will be in a month or six weeks, its capacity will be 25,000 feet daily, besides two shingle machines, capable of cutting 40,000 *per diem*. There is also a lath machine attached. Mr. Wyley will have the management of the working of the establishment, and as there is a good supply of timber convenient, will be likely to make the concern pay well.

A little farther east is Mr. Haddin's mill, and at Utoff station, another mill, run by

Mr. Overend, both are doing a good business. Although the woods in the neighborhood were worked over by lumbermen ten years ago, there will be found enough timber to keep these mills running for eight or ten years yet. Reaching Orillia, we come to Andrew Tait's mills, with a capacity of 25,000, and two shingle machines of a capacity of 40,000 *per diem*. A local paper, recently referring to this mill, says :—

Mr. Tait came here some fourteen or fifteen years ago, and started a little shingle mill on the premises still occupied by him, and by industry, perseverance, and business tact he has succeeded in bringing up his trade to its present dimensions. Visiting the establishment a few days ago, we found a large number of workmen employed in the various departments of bringing up timber to the saws, to be cut into boards, shingles, and square timber, measuring, piling, shipping, etc., the machinery used enabling the men to do their work with great despatch. But though Mr. Tait does an extensive lumber business in his own mills (for he has several), yet he passes, possibly, as much through his hands as an agent, and thereby considerably increases his income. It is in this way of turning over large quantities of stuff, rather than by large profits that Mr. Tait makes money, for, after all, the large profits talked of in the lumbering trade, are more imaginary than real.

OUR QUEBEC LETTER.

THE LUMBER TRADE—THE GREAT SALE OF CROWN LANDS—ENGAGING MEN FOR THE SHANTIES—NEXT YEAR'S SUPPLY—PRICES CURRENT.

QUEBEC, 25th Oct.—The most important event in the timber trade since the date of my last letter, is undoubtedly the recent great sale of timber limits by the Crown Lands of the Local Government. It is an encouraging sign to those engaged in lumber, that the prices obtained were much higher than have been paid for many years past. Nor can these prices be attributed in my estimation to any sudden excitement in the minds of buyers from the competition of the auction, or even from extravagant and speculative anticipations of further improvement in trade. The attendance at the sale included all the best known lumbermen from the districts of the Ottawa, Three Rivers, Quebec, and St. John N. B. The purchasers were principally found to be of the most cautious, conservative, and experienced operators of the country, Most of them had either personally investigated the limits upon which they bid, or possessed confidential information from explorers employed by them. Close observers at the sale noticed that some of the lots sold were knocked down to parties, who were undoubtedly buying for leading capitalists sitting near them. Several of such were present; — well-known business men, who though not actually engaged in lumbering operations themselves, have been in the habit of advancing large amounts to those actually engaged in the trade. Larger prices than would have been otherwise realized, were doubtless in some degree obtained by the prevalence of the impression that the pine limits offered at this auction were amongst the last really first class wooded lands remaining in the hands of the Government of Quebec. Three hundred and forty-five dollars a mile is undoubtedly a big price, but there are in the trade very few who would care to insinuate that the money paid for the lands in block "A" of the Upper Ottawa Agency is too high. If the reports of the railway surveying party which explored this portion of the forest some ten years ago are to be credited, most of the purchasers of these lots will realize fortunes out of them. For some few years to come they can of course look for no return, their lumber being in the main, quite inaccessible. The Federal Government will have to be looked to, for improvements in the streams; but as the pine becomes more scarce, these improvements will have to be made as a matter of course. It is too, by no means improbable, that some of these lands will be partially opened up by the contemplated extensions of the various lines of railways in the district of Ottawa. Speaking of railways reminds me of the fact that several operators in the Ottawa district are seeking to make terms with

THE Q. M. O. AND O. R. R.

for the conveyance of their lumber to Quebec next season, by this line, instead of by water. I do not think it necessary to give here the prices obtained and the names of the purchasers at the Local Government sale of timber limits, since they have all been published in the daily papers. The Provincial Treasury has been swelled by the sale to the extent of some $262,000. Whether or not the Honorable Commissioner of Crown Lands has served the interests of Quebec's future by throwing all these valuable lots into the market together, will be judged of better hereafter than now. The trade has certainly no ground of complaint in the matter, since no one apprehends another glut in the market.

SHANTYMEN.

The local timber brokers and agents of western lumbermen are busy engaging shantymen. This is a much less easy matter this fall than it has been for some years past. Fortunately for themselves, and consequently for general business, the number of unemployed workmen is now much less than it has ever been since the commencement of the late financial depression. Some hundreds of men have been already sent to the bush from this city and ninety more leave to-night. Of these, the greatest number are bound for the oak forests of Ohio and Michigan. Wages run from $24 per month for hewers to $45 and $46 for broad axe men. Almost all of this batch are French Canadians. After this date it will be difficult to engage many many more shantymen here this winter.

SALES AND PRICES CURRENT.

Within the past week or ten days a great many sales have been made for future delivery. Something like 500,000 feet of oak have been sold in various lots at the undermentioned prices :—

Oak, Ohio, 70 feet, average....50 cents.
" Michigan, 60 ft. " ....48 cents.
" Canada, 60 ft. " ....45 cents.

Nothing has been done here in pipe staves since the date of my last letter. Quotations remain as before. For West India, white oak—$80 can be had on contract.

West India, red oak, could be sold 1¼ thick, for $74.

Board pine, 20 inch string, 33 cents. A quantity has been contracted for at this price.

In elm and birch there is nothing doing. Hickory, 45 feet average, commands 32 cents per cubic foot.

Black walnut is scarce and in demand.

Western ash, 14 inches and upwards, 32 cents.

MINING NOTES.

Mining intelligence just now is almost *nil*. The rights of the Canada Gold Mining Co. in Beauce have been bought up by Mr. De Lery and others, who are forming themselves into a new Co. A large development is looked for next year in the phosphate industry, owing to Canada's wealth in that direction having attracted the favourable attention of French capitalists.

THE CREDIT FONCIER.

The capital stock of this institution has all been subscribed in France, and Mr. Thors, Assistant Manager of the Bank of Paris has arrived here to enquire into the resources of the country and report upon the advisability of increasing the capital to 50,000,000 francs. Money is certainly cheap enough here at present, but this influx of foreign capital will doubtless cause a further reduction of one to two per cent.

THE SEASON OF NAVIGATION.

will be closed here in about a fortnight. Already the ship labourers are leaving to seek employment for the winter in the southern ports.

STADACONA.

The Brockville lumber shippers have presented a beautiful epergne to Mr. J. A. McKinnon.

Mr. Milne, of the township of Scarboro', whose saw mill was destroyed by fire last week, estimates his loss at $22,000, on which the insurance is only $2,000. He will commence re-building at once.

OUR PARRY SOUND LETTER.

ACTIVE OPERATIONS—SHIPPING—STEAM BARGES—LUMBER CAMPS.

Parry Sound, Oct. 23, 1880.

The season's operations, as far as sawing is concerned, are drawing to a close, but yet considerable remains to be done. To expedite shipping, J. C. Miller, Esq., M. P. P., has purchased a steam barge and schooner rigged consort. They will carry about 700,000 feet of lumber, each trip, and left this week with a full cargo for Tonawanda.

Men are at work in the woods getting out next season's stock.

The Ontario Bank is estimated to take out seven million feet direct, this ensuing winter, and three millions under contract by Messrs. S. & J. Armstrong, of McKellar, lumber jobbers.

J. C. Miller, Parry Sound Lumber Co., will take out with his own men about ten million feet, and per Messrs. Armstrong, three millions, which is about the same quantity he took out last winter.

The Maganetewan Lumber Co., Byng Inlet, (J. H. Buck, Manager), will, with their own men, take out about eight million, and by Messrs. Armstrong, in the Townships of McKenzie, Hagerman, Ferrie and Croft, about six millions. Mr. Isaac Cockburn will take out about five million feet for the same company, *via* Doe Lake, and Maganetawan River.

Mr. Wm. Beattie, Parry Sound, will take out with his own men about three million, in the Township of McDougall, and by Messrs. Armstrong, in the Township of McKellar, about one million.

Mr. O. F. Wright, of Barrie, is operating in the Townships of McKellar, McDougall and Smith taking out pine. He also has a gang of men at work takiug out oak. The oak after being drawn to Parry Sound on sleighs, will be shipped thence by water without transhipment to Quebec.

Mr. Wright has two gangs of men at work taking down board timber by the Shawanaga river.

Mr. Lewis Stiller, is also taking out three million feet, by the same river, for Mr. Beck, of Penetang.

Operations are also progressing in Moon river.

Mr. Neagle is taking out board timber on South river emptying into Lake Nipissing, this will come by French river, the first raft by that route came down last season.

Messrs. McDougall & Smith are operating on the north shore of Lake Nipissing where there is some fine timber.

Messrs. Armstrong have five camps, with about 120 men at work.

Wages range at from $12 to $18 per month, hewers from $35 to $40.

SEGUIN.

FROM MIRAMICHI.

Our Chatham, Miramichi, correspondent states that shipping continues brisk from the different stations on the Miramichi river. Notwithstanding the large number of logs "hung up" but very few ships have been delayed in loading.

The stocks of deals at the different mills are much less than they have been for many years, and there are yet expected to arrive, some 15 or 20 vessels, which will still further reduce the winter stock. Had all last winter's logs been brought to the mills and been sawed up, the stock remaining to be held over would fall far short of what it has been for many seasons past. The lumber trade has never been better than at present here.

Large numbers of logging parties have been in the woods for some time, and many are just preparing to go (Oct. 22nd.) Logging will be carried on more extensively this winter than last, but our merchants will have to act with great caution in making contracts owing to the uncertainty of getting logs to market the same season they are cut. This arises from the fact that the greater portion of the logs are now cut on a small stream far from the main waters of the Miramichi, and in spring especially, when there is not much snow, as was the case last winter, the water is so scarce that thousands have to remain until the fall rains.

About 10,000,000 feet of last month's logs are expected at the rafting ground this week, some of which may be down to the mills next week, but few of them will likely be cut this fall, if not absolutely required to make up cargoes.

The recent rains have caused St. John river to rise five feet, and the gain of logs at Grand Falls has been in consequence broken. A considerable quantity of timber has also been set free on the Miramichi river.

A YOUNG Mecklenburg noble went recently to Monaco with an old family servant, and won at a sitting $60,000. Judge his amazement when on the next morning the old and trusted servant was nowhere to be found, having fled and taken the money with him. The man, it was presently discovered, had taken the money to the young noble's home, that it might be safely out of harm's way.

REID & CO., WHOLESALE LUMBER DEALERS. Lumber, lath, shingles, &c. Car lots to suit customers. Best culls in the market for from $6 to $7 per M.
OFFICE ON DOCK—Esplanade, foot of Sherbourne Street, Toronto. 2in

DISSOLUTION OF PARTNERSHIP.

THE PARTNERSHIP HERETOFORE existing between GEO. BENGOUGH and WM. DINGMAN, as Machinery Brokers, has this day been dissolved by mutual consent. All accounts will be settled, and the business carried on by Geo. Bengough under the name and style of Wm. Dingman & Co.
GEO BENGOUGH,
WM. DINGMAN,
Witness : ED. E. KING.

LAUDER & THORNTON MFG. CO.,
MANUFACTURERS OF
Steam Gauges, Vacuum Gauges
ENGINEERS' & PLUMBERS' BRASS GOODS, &c.
98 Adelaide Street East, Toronto.
Steam Gauges correctly tested and repaired.
2-5in

Ontario Agricultural College.

TENDER FOR COAL.

Sealed Tenders will be received by the undersigned until the evening of Friday, the 5th of November, for the following supplies for the Ontario Agricultural College, Guelph :—

200 TONS SOFT COAL.
50 TONS HARD COAL.

The Stove coal to be Scranton or Pittston. The tenderer to name varieties and prices of Soft coals. Coal to be well screened, and free from slack, and to be delivered satisfactorily at the Institution as required during the month of November. For forms and conditions of tender apply to
JAMES MILLS,
President.
Guelph, Oct. 23rd, 1880. 1.

Andrew Mercer Ontario Reformatory for Females.

Tender for Labour of Inmates

Offers addressed to the undersigned will be received up to noon of
WEDNESDAY, 10th NOVEMBER,
for leasing for a term of five years the labour of fifty or more of the adult female prisoners committed to the REFORMATORY FOR FEMALES, TORONTO, together with the requisite amount of shop space, properly heated and lighted, which is all the Government will furnish.
Tenderers will require to state the number of prisoners required, the exact nature of the industry it is proposed to carry on, and the amount of shop-room required. The highest or any tender not necessarily accepted.
The shops and premises may be seen any day, between the hours of two and five p.m., and any further information may be obtained from the undersigned.
J. W. LANGMUIR,
Inspector of Prisons and Public Charities.
Parliament Buildings,
Toronto, 26th Oct., 1880. 2

King of the Cannibal Islands.

A TALK WITH THE GOVERNOR OF THE ISLANDS OF FIJI.

The newly-appointed governor of the Fiji islands, George W. Des Vœaux, and staff rrrived from England a few days since. He left this city yesterday en route for the Fiji island. A reporter for the *Graphic* called upon Gov. Vœaux at the Fifth avenue hotel and obtained much interesting information concerning that almost unknown and greatly misrepresented group of islands. Of the present condition of the Fijis and their commercial relations with other countries the governor said he could speak from personal knowledge, having spent many months there.

"To begin with," he said, "I will say that the natives are no longer cannibals, but all of them are civilized and Christians. The islands since 1874 have been under British rule, the ex-King Cakoban having ceded his domains to Queen Victoria, only asking in return that England take future control of them. Since that time great prosperity has been the result. Our farmers received the gold medal at the Centennial exhibition, the Paris exhibition, and at the Sydney exhibition for Sea Island cotton. They also took the gold medal for coffee at the late Sydney exhibition. The growth of cotton has only been recently introduced on the islands, but is making great strides. In the production of sugar much progress has been made, and in the next few years large crops will be exported. A Sydney corporation has recently invested £150,000 in sugar plantations, and it is expected that other companies will follow, the climate being excellent for the growth of sugar cane. There are many thousands of acres of land on the larger islands set apart for the production of cocoanuts, and quite a trade has been established with the Sydney and Australian colonies. The copra, which is really the meat of the cooanut, is valuable and turned into oil. The coffee yield in the third year after plantation is excellent and has, in many instances, flowered in the second year. The labour market is all that is needed. The government does not encourage the employment of native labour at a distance from their homes, as it tends to decrease the population of the Islands. Abundant labour can be obtained through the government from the Solomon islands and New Hebrides at a very cheap rate. The cost to the planter with food is less than 1s. per day. Emigration has lately been started with the Indian colonies, so as to provide for any demand that may be made by reason of the extra cultivation of land. These labourers are generally engaged for three years, and receive their pay at one time, at the end of the contract, which cannot exceed that period. Then they are sent home, and if they choose to return they can do so after a limited time. They are paid through the government, and the only cost to the planter in the three years is the price of the importation and return of the men.

"Trade, in various commercial productions, is growing rapidly, and in the next year or two it is expected to be still more enlarged. The revenue returns, before the Islands were ceded to the English government, amounted to about £13,000. In 1878, after four years of the present administration, the returns footed up £70,000, and last year £90,000. The white population now numbers a little over 2,000, and the native 100,000. Last year the births exceeded the deaths to a large degree. The area of the Islands is about 80,000 acres, and the inhabited part is greater than the whole of the West Indies. The largest and representative island is Fiti Levu, about the size of Jamaica, and the second of importance, Suva, similar to that of Porto Rico. The climate is wonderfully good for that of a tropical country, and there is an utter absence of malarial fever, the only disease being dysentery, occasioned by poor living, and drinking to excess. The natives are by no means of an indolent disposition as one would imagine. A large number of them employ themselves in cultivating cotton or cocoanuts on their own account, and as a whole, are a peaceable race. There are no European soldiers on the islands outside of those attached to the government department. The Islands are divided into ten provinces, and each is governed by a sub-governor, or roka, as they are termed. These are assisted by the advice of a European magistrate. They make a return of about £20,000 to the government yearly on account of expenses. The colony is self-supporting, and pays for a mail between Sydney and Viti Levu.

"Cannibalism is a thing of the past. No more of it is seen or ever will be heard of again. The natives have become Christians through the agency of the Wesleyan churches and the Roman Catholic missionaries. In 1876 there were some ten thousand cannibals, who chiefly resided in the mountainous interior of the Viti Levu. They committed serious outrages upon the coast natives, and to-day all of them are as peacable and as loyal as one could wish them to be.

Bathing.

It is important to recognize that the only virtues of water as used by the bather are two—namely, its value as a cleansing agent, and as a surface stimulant. In this last capacity it simply acts as a medium affecting the temperature of the part to which it is applied, or which is immersed in it. Right views of the fact in reference to this matter are important, as there can be no question that some persons overrate the uses of cold water, and run considerable risks in their pursuit of them. Every beneficial action that can be exerted by a bath is secured by simply dipping in the sea, or a very moderate affusion of cold water! Except in cases of high fever, when it is desired to reduce the heat of the body by prolonged contact with cold, a bath of any considerable duration is likely to be injurious. Then, again, it is necessary to recognize the risk of suddenly driving the blood from the surface in upon the organs. The "plunge," or "dip," or "shower," or "douche," is intended to produce a momentary depression of the temperature of the surface in the hope of occasioning a reaction which will bring the blood back to the surface with increased vigour, and almost instantly. If this return does *not* take place; if, in a word, redness of the skin is not a very rapid consequence of the immersion, it is impossible that the bath can have been useful, and in nine cases out of ten, when the surface is left white or cold, it does harm. The measure of value is the redness which ensues promptly after the bath, and this reaction should be produced without the need of much friction, or the bath is not worth taking.

Water Telescopes for Watching the Movements of Fish.

I have read somewhere a good account of water telescopes. I think it is in Galton's "Art of Travelling," which is full of information. I also, when a student, read of there being used on some engineering work. I think it was during the improvement of the Thannon over thirty years ago. The principle is that you can see plainly to a great depth in water, especially if the bottom of the sea or river is of a light colour, if the surface is perfectly smooth. On a perfectly calm day, when the surface of the sea was like a mirror, I have seen scallops netted at Port Magee, Valencia, in from three to four fathoms of water, and on other occasions, on the west coast I have plainly studied the bottom of the sea to a far greater depth, while fishermen have told me that on such calm days they have seen the bottom in over forty or fifty fathoms. Such calm days are of rare occurrence, and if there is the least ripple on the surface you cannot see into the water. The use of the telescope, therefore, is to get below the disturbed surface into solid water. I made a water-telescope that I found very effective. It was a tin map case, about three inches in diameter, and about three and a half feet long. I took off the top and knocked out the bottom, and looked through the tube when the end was about a foot, or a foot and a half below the surface. I had no glass in it, but a glass might be an advantage, as it would keep a column of air in the tube, and thus prevent the water oscillating in it. I would like to know to what depth the Norwegian fishermen can see. The water in their fiords is very clear, like the water off the west coast of Ireland, into which you can see, for much greater depths than into the water off the east coast. In fact, when the tide is on "flow" in the Irish Sea it is rarely possible that you can see down into it anywhere within half a mile of the coast, as the "tidal current" and the usual "ground swell" keep it dirty. On this account I am afraid the telescope might not be as effective as it ought to be in the localities mentioned by Dr. Buckland.

THE French Government has cut off the usual allowance of 8,000 f. or 10,000f. to the Reformed Church of France for the formation of new parishes. The Chambers will be asked to renew the grant.

The Sound of Thunder.

The next remarkable feature of the storm is the thunder, corresponding, of course, on the large scale, to the snap of an electric spark. Here we are on comparatively sure ground, for sound is much more thoroughly understood than is electricity. We speak habitually and without exaggeratiou of the *crash* of thunder, the *rolling* of thunder, and of a *peal* of thunder; and various other terms will suggest themselves to you as being aptly employed in different cases. All of these are easily explained by known properties of sound. The origin of the sound is, in all cases, to be be looked for in the instantaneous and violent dilatation of the air along the track of the lightning-flash, partly, no doubt, due to the disruptive effects of electricity of which I have already spoken, but mainly due to the excessive rise of temperature which renders the air for a moment so brilliantly incandescent. There is thus an extremely sudden compression of the air all round the track of the spark, and a less sudden, but still rapid, rush of the air into the partial vacuum which it produces. Thus the sound-wave produced must at first be of the nature of a bore or breaker. But as such a state of motion is unstable, after proceeding a moderate distance the sound becomes analogous to other loud but less violent sounds, such as those of the discharge of guns. Were there few clouds, were the air of nearly universal density, and the flash a short one, this would completely describe the phenomenon, and we should have a thunder *crash* or thunder *clap*, according to the greater or less proximity of the seat of discharge. But, as has long been well known, not merely clouds but surfaces of separation of masses of air of different density, such as constantly occur in thunder storms, *reflect* vibrations in the air; and thus we may have many successive echoes, prolonging the original sound. But there is another cause, often more efficient than these. When the flash is a long one, all its parts being nearly equidistant from the observer, he hears the sound from all these parts simultaneously; but if its parts be at very different distances from him, he hears successively the sounds from portions further and further distant from him. If the flash be much zig-zagged, long portions of its course may run at one and the same distance from him, and the sounds from these arrive simultaneously at his ear. Thus we have no difficulty in accounting for the rolling and pealing of thunder. It is, in fact, a mere consequence, sometimes of the reflection of sound, sometimes of the finite velocity with which it is promulgated. The usual rough estimate of five seconds to a mile is near enough to the truth for all ordinary calculation of the distance of a flash from the observer. The extreme distance at which thunder is heard is not great, when we consider the frequent great intensity of the sound. No trustworthy observation gives in general more than about 9 or 10 miles, though there are cases in which it is possible that it may have been heard 14 miles off. But the discharge of a single cannon is often heard at 50 mile, and the noise of a siege or naval engagement has certainly been heard at a distance of much more than a hundred miles. There are two reasons for this: the first depends upon the extreme suddenness of the production of thunder; the second, and perhaps the most effective, on the excessive variations of density in the atmosphere, which are invariably associated with a thunder-storm. In certain cases thunder has been propagated, for moderate distances from its apparent source, with a velocity far exceeding that of ordinary sounds. This used to be attributed to the extreme suddenness of its production; but it is not easy, if we adopt this hypothesis, to see why it should not occur in all cases. Sir W. Thomson has supplied a very different explanation, which requires no unusual velocity of sound, because it asserts the production of the sound simultaneously at all parts of the air between the ground and the cloud from which the lightning is discharged.

MR. MACKAY, the Bonanza millionaire, is said to have become morose and suspicious, so many adventurers and impostors having practiced on him that he has lost faith in human nature.

IT makes a mother's heart revert to her younger days when she comes into the parlour next morning after her daughter's beau has been round, and finds only one chair in front of the fireplace and the others sitting along the wall as if they hadn't been touched for three years.

Big Farms on the Pacific Coast.

The "Mammoth Farm," of the Blacklock Wheat Growing Company of Washington Territory, comprises 60,000 acres of wheat land, of which 25,000 acres are fenced. Ground has been broken for a crop which is expected to foot up between 300,000 and 400,000 bushels.

Another large farm is that of Dr. Hugh J. Glenn, of California. It is in the Sacramento Valley, and comprises 65,000 acres, of which 45,000 acres were in wheat this year. The owner had provided 350,000 sacks, each holding 140 pounds, but at last reports they promised to be unequal to the task of holding the crop. Dr. Glenn has his own machine shops, blacksmith shop, saw and planing mills, etc. He manufactures his own waggons, separators, headers, harrows, and nearly all the machinery and implements used. He has employed 50 men in seeding and 150 in harvest, 200 head of horses and mules, 55 grain headers and other waggons, 150 sets of harness, 12 twelve-foot headers, 5 sulky hay rakes, 12 eight-mule cultivators, 4 Gem seed sowers, 8 Buckeye drills, 8 mowers, 1 forty-eight inch separator, 36 feet long and 13½ feet high, with a capacity of 10 bushels per minute; 1 forty-inch separator, 36 feet long; 2 forty-feet elevators for self-feeder, 1 steam barley or feed mill, and 2 twenty horse power engines. The forty-eight inch separator thrashed, on the 8th of August, 1879, 5,779 bushels of wheat.

Hysteria.

Hysteria is by no means confined to women, for one of the worst attacks which I have witnessed occurred in a man. This gentleman one day found he had lost his all, and on returning home, he became the victim of laughing and crying, until sheer exhaustion brought an end to the attack. This was quite involuntary. But it might be remarked that even in hysteria such a thing as fashion prevails, showing that a certain power of restraint may be used. When I was a boy, hysteria was the fashion; and if during conversation any remark was made to touch a lady's sensibilities, she would clinch her hands, make a wry face, her eyelids would undergo a rapid vibration, she would give a sob or two, and sink from her chair. The cure was accomplished by throwing cold water over her face; and if this encroached on her neck or wetted her dress, the cure was very sudden and complete. During church service, it was the usual practice to have a young lady carried out; but I think as a rule she belonged to an inferior class, whose kind of work during the week did not allow them to play dress-making tricks with themselves on a Sunday; for if I remember rightly the cure was effected in their case by the call for a pen-knife. This was used to loosen the body-armor, when a loud explosion took place, followed by a deep sigh and a speedy recovery of the patient. So fashionable was fainting or hysterics in church, that I have a lively remembrance of a young lady who had a weekly attack, and was often carried out by a gentleman in the next pew. As these two were afterward married, I apprehend that this was one mode of courtship. I am only too thankful to think, for the peace of other people, that this method of forcing matrimony has gone out.

Disappearance of a Railway Train.

For a railway train to be lost, to entirely disappear, would seem to be almost impossible, yet this curious casualty has actually happened in the United States to the Kansas Pacific Railway, which has spent $2500 in searching for the runaway, and has at last given it up in despair. About 100 miles west of Kansas city, the line runs through a place called Monatony, which was visited some time ago by a terrible storm and waterspout, over 600 feet of track having been washed away. The adjacent neighbourhood, which consisted of huge rolling prairie, was eight feet under water, and it is conjectured that the locomotive waggons (it luckily not being a passenger train) were carried away and buried under a landslip. This is the second time of such an occurrence, an engine having been lost in a quicksand at Kiown Creek in 1818.

"How musically his hoof-beats sound!" exclaimed an enthusiastic lover of the turf, as St. Julien speeded around the course at Brighton last week. "Yes," replied his matter-of-fact companion; "he is beating time.'

A New Oil Monopoly.

A very powerful combination of western capitalists has obtained control of the oil producing country of California discovered up to the present time, which consists of a section of ths Coast Range mountains, five hundred and fifty miles in length, stretching from Santa Cruz to Santa Barbara and two hundred thousand acres. For four years the work of examining the region by experts has been going on and is now completed, and every spot giving indication of oil has been secured. Part of the region was government lands and part of it has been leased for twenty years from farmers and ranch owners who had obtained possession. During the last twelve years three parts of the oil-bearing region have been partly developed by various men, and the present monopoly is the result of successful combination of the original owners, who finally sold their interests to the three leading men : C. N. Felton, ex-Assistant United States Treasurer, and one of California's large capitalists ; Lloyd Tevis the president of Wells, Fargo & Co. Express and Bank, and D. G. Scofield. They have formed the Pacific Coast Oil Company, and under its control the California oil country promises to be one of the great important oilproducing regions of the world. During the last six months rapid strides have been made in developing the region. Wells have been sunk which show excellent results, machinery bought, works and refineries constructed, pipe lines laid, barrel and cask factories built, and with unlimited capital enormous negotiations are effected for the equipment in every respect of a gigantic business enterprise, which is probably destined to exert a strong influence upon the Pennsylvania district, and upon all existing oil markets.

A short time ago Messrs. Felton, Tevis, and Scofield bought the entire stock of the company, and now have sole control of the business. About twenty one "rigs" for drilling are now in process of construction, and the development of the country will be pushed as quickly as money can push it. The last well which has been drilled was a fifty barrel pumping well in the Santa Cruz district. which was struck last week. The company now has sixteen wells down in the region which yield three hundred barrels daily, and new wells are begun nearly every day. The average per centum of lubricating oil gained from the crude is seventy-five per centum, which is a large average. The home market at the present time absorbs all the oil that the country can produce, but the amount produced will soon run beyond the capacity of the home market, which includes California, Nevada, and Oregon.

Touching the markets which the Pacific Company claims for their oil, a few facts will suggest the condition under which these men enter into competition, with eastern oil producers in the United States. California, Oregon, and Nevada together consume 3,500,000 gallons yearly. Japan, which is from five to six months sail "around the horn" from New York, and thirty-five days' sail from San Francisco, consumes 15,000,000 gallons a year, China, which is fifty days' sail from San Francisco, and Japan consumes 5,000,000 gallons a year ; Jaya, sixty days from San Francisco, and five or six months from New York, consumes 5,000,000 gallons a year, and Mexico, Australia, and the Sandwich Islands, each large consumers, are also advantageously situated for the California trade.

Last year the production of the Pennsylvania region was nearly 20,000,000 barrels. Nearly all the oil sent to China, and Japan from this part of the United States, is carried by ship around the Horn and the Cape of Good Hope. The shorter voyage from California is an immense advantage to the new monopoly.

Fasting Horses.

To determine the capacity of horses to undergo the privations incident to a state of siege, a series of experiments were made with these animals in Paris, some years ago. The experiments proved (1) that a horse can hold out for twenty-five days without any solid nourishment, provided it is supplied with sufficient and good drinking water. (2) A horse can barely hold out for five days without water. (3) If a horse is well fed for ten days, but insufficiently provided with water throughout the same period, it will not outlive the eleventh day. One horse, from which water had been entirely withheld for three days, drank on the fourth day sixty litres of water within three minutes. A horse which received no solid nourishment for twelve days was nevertheless in a condition, on the twelfth day of its fast, to draw a load of 279 kilos.

USEFUL RECEIPTS.

The skin of a boiled egg is the most efficacious remedy that can be applied to a boil. Peel it carefully, wet and apply it to the part affected. It will draw off the matter, and relieve the soreness in a few hours.

To Clarify Fat.—Cut into small pieces, fat of either beef or mutton. Put into a saucepan and cover the pieces with cold water. Still until the water boils, skim carefully and allow to boil until the water has all been discharged in vapour—the fat will then be of the colour of salad oil—strain and it will keep any length of time.

Apple Batter Pudding.—Four beaten eggs, one pint of rich milk, two cups of flour, one teaspoonful of salt, two even teaspoonfuls of baking powder. Peel and core eight ripe, tart apples ; put into a deep, baking-dish ; fill the centre of each with sugar and pour the beaten batter over them. Bake an hour and eat with cream and sugar, flavoured with nutmeg or melon.

Good Apple Butter.—Boil a kettleful of new cider until reduced two-thirds. Have a quantity of tart, juicy apples pared, cored and sliced, and put as many into the kettle as the cider will cover. Cook slowly until tender, skim out and put in a second supply of apples. When tender turn all out and let stand over-night. In the morning return to the kettle and boil down until quite thick. Add whatever spice you please. It requires almost constant stirring,

Quince Preserves.—Pare, quarter, and core, saving the skins and core. Just cover the quarters of quince with cold water and simmer until tender. Take out the pieces carefully, and lay on flat plates. Add the parings, etc., to the water cover tightly and stew an hour. Strain through a jelly-bag and to each pint of the juice add a pound of granulated sugar. Boil, skim, add the pieces of quince and boil gently 10 minutes. Turn out and let stand over-night. In the morning skim out the pieces, boil up the syrup, put in the pieces, simmer 10 minutes, take out on to flat dishes and set in the sun, Let the syrup boil until it begins to jelly, then fill the glass cans two-thirds full of the fruit and cover with the syrup.

To Roast a Turkey.—Make a stuffing of bread crumbs, pepper, salt, and a little piece of butter ; mix it lightly with an egg. Stuff the craw, Split it, and lay it down a good distance from the fire, which should be clear and brisk. Dust it with flour, and baste it with cold lard several times. When done, serve it with its own gravy. Be sure to skim the oil from the top of the gravy before serving it in the boat proper for its appearance at table. If it be of a middle size, that is to say, seven or eight pounds in weight, an hour and a quarter should be allowed for roasting. The same directions answer for baking in a stove, only the process is slower, and will require from two to three hours, according to the tenderness of the flesh. If by any accident a turkey has been allowed to get stale or in the least tainted, wash it thoroughly in vinegar and water, in which a tablespoonful of bicarbonate of soda has been dissolved. It will remove all unpleasant taste and odour, and render the flesh more tender.

A Singular Privilege,

Lord Kingsale and Lord Forster both enjoy the singular privilege of standing covered in the presence of royalty. Lord Forster obtained this concession from Henry VIII., but the right belonging to Lord Kingsale dates from the reign of King John. It originated thus :—His ancestor, the Earl of Ulster had a very strong arm, and one day, at the desire of the King, he chopped a massive helmet in twain in presence of the French Sovereign, King John was so pleased at the feat that he desired him to ask at his hands any favour that he pleased, and the Earl replied that, as he had estates and wealth enough, he would only ask for himself the singular privilege referred to. It is related that on one occasion at a drawing-room George III. rather nettled at the length of time the hat was kept on, remarked, that although he had no wish to call in question Lord Kingsale's right to wear it in his presence, still his lordship might have remembered that there was a lady (the Queen) in the room.

A telephone operator, when asked to say grace at a dinner, the other day, horrified party, in a fit of absent-mindedness, by bowing his head and shouting, "Hello! hello?" Force of habit.

A Farmer's Creed.

At a recent farmer's convention held in Providence, the following creed was adopted :

"We believe in small farms and through ultivation ; we believe that the soil lives to eat, as well as the owner, and ought, therefore, to be well manured ; we believe in going to the bottom of this, and therefore deep ploughing, and enough of it ; all the better if it be a subsoil plough ; we believe in large crops, which leaves the land better than they found it, making both the farm and farmer rich at once ; we believe that every farm should have a good farmer ; we believe the fertilizer of any soil is a spirit of industry, enterprise, and intelligence ; without these, lime, gypsum, and guano would be of little use ; we believe in good fences, good farmhouses, good orchards, and good children enough to gather the fruit ; we believe in a clean kitchen, a neat wife in it, a clean cupboard, a clean dairy, and a clean conscience ; we believe that to ask a man's advice is not stooping, but of much benefit ; we believe that to keep a place for everything and everything in its place, saves many a step, and is pretty sure to lead to good tools and to keepin them ing good order ; we believe that kindness to stock, like good shelter, is saving of fodder ; we believe that it is a good thing to keep an eye on experiments and note all, good and bad ; we believe that it is a good rule to sell grain when it is ready ; we believe in producing the best butter and cheese, and marketing it when it is ready."

Salt for Sheep.—It is said that in Spain whenever sheep are kept in the neighbourhood of rock salt hills or sea salt and have access to it, they thrive better than in other situations, and in France the same thing is found to exist in the neighbourhood of the sea coasts and the salt works of the north, sheep give more and better wool, and the mutton is more highly esteemed than that from other localities. Where it is given to them when at pasture, the amount should be from half an ounce to an ounce each, daily ; and it is a well-known fact that sheep never stray from an enclosure in which salt and water are provided for them.

Saddle Horses.

At the present moment there is a great market in England for almost every variety of agricultural produce, but prices for the general run of such animals as are exported, though satisfactory to the common graziers and stock farmers, are not high enough to tempt men of capital to breed, raise and prepare them for market.

Raising trotting and other horses does not remunerate very highly, because so few become fast enough to sell for the best prices, and as trotting is an unnatural pace to race in, a great deal of expense is necessary to keep and pay trotting men to handle the colts. Breeding race horses is no better, on account of the tendency among thoroughbreds to grow light and weedy, so that, should they fail in being fleeter than the average, there is no demand for them.

Now, as the best saddle horses in England are always in demand, and those of extra merit sell for very large sums, any gentleman who would go intelligently to work in selecting dams of powerful frames, and using a stallion of the most fashionable blood, might secure an income of many thousands per annum by such management as would bring out from 10 to 20 young horses just fit for riding in the chase, and the thousands might be tens of thousands if with proper breeding and management, these young horses were large and strong enough to carry gentlemen of heavy weight up to the hounds.

The art of successful stock farming consists in producing such animals as will sell for great prices, without being obliged to expend heavily in preparing them, and these animals can be brought out fit for sale without any expensive training.

Saddle horses commanding prices equal to those of the best trotters here, will require no breaking to harness, for it would be a serious drawback to a valuable hunter to have been used in any way in harness.

"Who are these Pan-Presbyterians that have been having a convention?" asked Mr. Slogoer of his friend Jolliboy. "That's what I want to know myself," said Jolliboy. "I never heard of them till now. I suspect, though, it's only another name for the orthodox fellows who stick to the belief in eternal punishment. They probably call themselves Pan-Presbyterians because whoever leaves them jumps out of the frying-pan into the fire."

Cider Vinegar.

The enormous supply of apples all over the country suggests the idea that a good part of them may be turned into cider vinegar with profit. Vinegar may be made directly from the apples, but it is much preferable to first extract the cider.

When cider is intended for vinegar it should be made with the same cleanliness as if intended for drinking or keeping, and the casks into which it is put for fermentation, should be equally sweet, and if old whisky casks are used, it improves the cider as well for vinegar as for drink.

There should be nothing added to the juice, as pure juice is best ; the mustard seed, sulphite of lime, and other such ingredients used for stopping fermentation, injure the vinegar. The better the apples, the better the vinegar, and cider made late in the autumn from fruit rich in juices, is much better than that from windfalls and early-gathered fruit, as cider is better for the same reasons.

Vinegar may be made from crushed apples, or from the pomace after the cider is pressed out, as is often done from the pomace of grapes and of other fruits. The apples are ground and put into shallow holders where they are left to ferment for a couple of days, then pressed and the juice put directly into old vinegar casks containing mother of vinegar. If the weather is cool the casks are placed where they will be kept warm, and in a few months the vinegar may be drawn off into clean vessels. The chief auxiliary to producing vinegar quickly is exposing the fluid to the air at a mild temperature, but for the best cider vinegar, where haste is not necessary, it is better to extract and barrel the cider, allowing it to ferment as in the best process of cider making, and then using the cider as desired. Most cider vinegar, and perhaps the best, is made by leaving the bung open and allowing the change to take place gradually, which will be in a longer or shorter time as the temperature is warmer or cooler.

Numerous methods are in practice by large manufacturers who purchase large quantities of cider and expose it to the air in large vats in various ways. One process is to allow the cider to run slowly over beech shavings ; another allows it to trickle down over boards or shelves, while still another process is to force bubbles of air through the liquor continuously.

A French method consists in scalding the barrels with water and then pouring boiling vinegar into them and rolling them until the barrels are thoroughly saturated, when the barrels are filled about one-third full of cider vinegar, and some two gallons of cider poured in each seventh or eight day until the casks are two-thirds full. In two weeks from the time of adding the last two gallons, one-half is drawn off and the process repeated. The casks are kept as near a temperature of 80 degrees as possible.

This last process gives farmers a hint for producing cider as may be desired, by keeping the barrel in a warm place and adding cider to the vinegar barrel, or by putting a quantity of sharp vinegar into the cider.

The cores and parings left from drying apples may be used as above described, or they may be placed in jars or tubs, and warm water poured over them, and set in the sun or other warm place for a week or ten days and the juice added to the vinegar barrel, or used with the addition of cider. The principle of vinegar making is fermentation, and this comes from the presence of sugar, and may be hastened by yeast or similar aids, but the best agent to produce fermentation is strong old vinegar. The richer the juice in saccharine matter the stronger the vinegar, and the warmer the temperature and the more the vinegar is exposed to the air the more rapid the process.

The Roman Catholic bishop of B—— is a most energetic cleric. He performs as much parish duty, I believe, as most priests. He received the other day the confession of a little boy. At the close said his right reverence : "Well, have you anything more to tell me?" "No," said the lad, deprecatingly, "but I'll have more next time!"

The other day a census-taker presents himself at a house where all is in confusion and several women are running to and fro with pieces of red flannel, camphor, and the like. "Have you any children," says the employee to the agitated head of the household. "I have two," replies the latter, "and—as it will save you the trouble of calling round again—if you will have the goodness to take a seat for a moment, I will have three—at least three."

MARKET REPORTS.

CANADA LUMBERMAN OFFICE,
TORONTO, 28th Oct., 1880.

The stock of lumber on hand is small, and the demand for export continues in advance of the transport facilities afforded by the Northern Railway, which is practically the only route which feeds this market. Large quantities are on hand along the railway line waiting shipment. There is a brisk demand for vessels for United States ports. Rates to Oswego, stiff at $1.50; but within ten days or two weeks the stock for that market will be about all shipped. There will probably then be a lull in the trade as local market is dull and will likely continue so. The docks in Oswego are full of lumber The demand there is good, and while no great advance of price is looked for, the business is expected to continue healthy until spring, when if the anticipated large supplies are taken out this winter a decline will likely take place in prices. Building operations are brisk, and a good many buildings are expected to be put up next spring. Carpenters wages range from $1.25 per day.

WHOLESALE RATES.

Mill culls	$ 5 50	@	7 00
Shipping cull stocks	10 00	@	11 00
Shipping culls, (in box,)	8 50	@	10 00
Dressing inch,	11 50	@	13 00
Flooring, ¼ & ½ in,	12 00	@	13 00
Joisting and scantling,	9 50	@	10 50
Mill run sidings	12 00	@	14 00
Pickings	17 00	@	20 00
Clear and pickings	25 00	@	28 00
Lath	1 25	@	1 40
Shingles, No. 1	2 10	@	2 20
No. 2	1 40	@	1 60

LONDON, ONT.

Common Lumber	$10 00	@	12 00
Stock boards	13 00	@	15 00
Clear in. and 1½ to 2 in.	25 00	@	30 00
Bill stuff, up to 16 feet		@	13 00
over 16	13 00	@	14 00
Lath, per 1000 feet		@	4 00
Shingles No, 2, per M		@	2 65
per square		@	1 90

OTTAWA.

The following are quotations in the Ottawa market :—

12 in. stocks, good	$18 00	@	20 00
12 " S. culls	10 00	@	10 50
10 " good	16 00	@	18 00
10 " S. culls	9 50	@	10 50
Strips, good	17 00	@	20 00
" culls	6 50	@	7 50
Sidings, 1¼, 1½, and 2 in., good	23 90	@	26 00
" " culls	9 00	@	10 00
Lath (₱ 1,000 pcs.)	0 00	@	1 00
Deals (₱ Quebec standard) 1st	0 00	@	110 00
Deals (₱ Quebec standard) 2nd	0 00	@	65 00
Deals (₱ Quebec standard) 3rd	0 00	@	8 50
Cull deals (₱ M. ft.)	6 50	@	8 59

FREIGHT.

To Montreal, $1.15; Quebec, $2; Burlington, $2; Whitehall, $1.25; Albany, $3.50; New York, $4.

DETROIT.

Yard rates, continue as follows :

Uppers, all thicknesses	$40 00	@	45 09
Selects	35 00	@	38 00
Fine common, thick		@	30 00
No. 1 common stock, 1x12	16 00	@	18 00
Common shippers, 1x12	13 00	@	14 00
Flooring, select		@	25 00
common		@	22 00
Roofing, matched		@	16 00
Siding, clear		@	24 00
A select		@	20 00
B common		@	16 00
Ceiling, select		@	30 00
common		@	25 00
Shipping culls		@	12 00
Mill cull boards		@	10 00
Dimension or bill stuff to 16 feet		@	14 00
18 to 24 feet		@	15 00
longer than 24 feet	16 00	@	20 00
Shingles, clear, 18 inch		@	3 75
6 inch clear, 18 inch		@	2 75
Lath		@	2 25

BUFFALO.

We quote cargo lots :

Uppers	$35 00	@	40 00
Common	16 00	@	19 00
Culls	11 00	@	12 00
Assorted lumber in car lots or boat loads :			
3 uppers 1 inch	$	@	40 00
Do. 1¼ and 1½ in	40 00	@	42 00
Do. 2 in	45 00	@	47 00
Do. 2½ 3 and 4 in. special			
Pickings 1 inch	28 00	@	30 00
" 1¼ and 1½ in	33 00	@	35 00
" 2, 3, and 4 in., special	22 00	@	00 00
Shelving	22 00	@	00 00
Cutting up	22 00	@	24 00
Sidings, com., 1 in	16 50	@	17 00
" 1¼ in. and over	17 00	@	20 00
Common, stocks	16 50	@	17 00
Box, all thicknesses	13 00	@	14 00
18 in XXX shingles	3 40	@	3 50
18 inch clear butts	2 40	@	2 50
Lath	1 75	@	1 80

We quote wholesale prices of hardwood lumber, delivered on cars or boat :

Walnut ½ inch clear	$65 00
⅝ inch, 1sts and 2nds	70 00
¾ inch, 1sts and 2nds, 14 feet coffin stock	73 00
1 inch 1sts and 2nds	73 00
1¼, 1½, 1¾, and 2 inch	74 00
2½ inch and thicker	75 00
counters	130 00
newels 7x5 to 10x10	90 00
common in. & thicker	50 00
culls, inch	35 00
culls, 1¼ inch	35 00
White ash, Ohio 1st and fine 2nds	28 00
Whitewood, inch	30 00
⅝ inch	28 00
¾ in coffin stock, 14 ft	30 00
square, 4x4 to 10x10	33 00
Chestnuts, 1sts and fine 2nds,	30 00
Maple	25 00
White oak, Ohio	30 00
Cherry, inch and thicker	42 00
Butternut	45 00
Hickory, best Ohio	35 00

CHICAGO.

The Chicago market was exceedingly dull—week ending Oct 23, but slightly revived on account of the non-arrival of some 20 or 25 cargoes of lumber, wrecked in the storms which raged recently on the Upper Lakes.

YARD RATES.

First and second clear, 1@ 1¼ in	$43 00
First and 2d clear, 2 in	45 00
Third clear, 1¼ @ 2 in	38 00
Third clear, 1 inch	38 00
1st and 2d clear dressed siding	20 00
1st com. dressed siding	19 50
Second common	17 50
Flooring, 1st com. dressed	34 00
Flooring, 2d com. dressed	32 00
Flooring, 3d com. dressed	24 00
Box bds, A, 13 in. and up	43 00
Box bds, B, 14 in. and up	37 00
Box boards, C	25 00
A stock boards, 12 @ 16 in., rough	37 00
B stock bds, 10 @ 12 in	33 00
C stock bds, 10 @ 12 in	27 00
Common stock boards	17 00
Cull boards	$10 00 @ 11 00
Fencing, No. I	13 50
Fencing, No. 2	11 50
Common boards	12 00 @ 15 00
Dimension stuff	11 00
Dimension stuff, 20 @ 30 ft	12 50 @ 20 00
Small timber, 6 x 6 to 8 x 8	12 00
Round posts, cedar	15 00
Pickets, dressed and headed, flat	15 00
Pickets, do., square	20 00
Pickets, rough,	14 00
Clear shingles	3 25
Extra "A" shingles	2 65
Standard "A" dry shingles	2 40
Shaded "A" shingles	1 10
No. 1 shingles	1 00
Cedar shingles	2 25
Lath, dry	2 25

OSWEGO, N. Y.

Three uppers	$38 00	@	40 00
Pickings	28 00	@	30 00
Pine, common	20 00	@	22 00
Common	14 00	@	16 00
Culls	12 00	@	14 00
Mill run lots	16 00	@	20 00
Sidings, selected, 1 inch	28 00	@	32 00
1¼ inch	28 00	@	35 00
Mill run, 1x10, 13 to 16 feet	16 00	@	20 00
Selected	20 00	@	25 00
shippers	15 00	@	16 00
Mill run, 1 and 1¼ in. strips	15 00	@	18 00
Culls, selected	20 00	@	24 00
1x6 selected, for clapboards	24 00	@	35 00
Shingles, XXX, 18-in. pine	3 00	@	3 50
XXX, 18-in. cedar	3 00	@	3 10
Lath	1 50	@	1 75

ALBANY.

FREIGHTS.

To New York ₱ M. feet	$ 1 00
To Bridgeport	1 25
To New Haven	1 25
To Providence	2 00
To Pawtucket	2 25
To Norwalk	1 25
To Hartford	2 00
To Middletown	1 75
To New London	1 75
To Philadelphia	2 00

Quotations at the yards are as follows :

Pine, clear, ₱ M	48@60
Pine, fourths	43@55
Pine, selects	38@45
Pine, good box	17@28
Pine, common box	14@17
Pine, 10 in. plank, each	38@42
Pine, 10-in. plank, culls	21@23
Pine boards, 10-in	25@28
Pine, 10-in boards, culls, each	17@18
Pine, 10-in. boards, 16 ft. ₱ M	28 00
Pine, 12-in. boards, 16 ft	28 00
Pine 12-in. boards, 13 ft	28 00
Pine, 1¼-in., siding, select	42 00
Pine, 1¼-in. siding common	18 00
Pine, 1-in. siding, selected,	40 00
Pine, 1-in. sidiag, common	16 00
Spruce boards, each	16
Spruce, plank, 1¼-in., each	20
Spruce, plank, 2 in., each	30
Spruce, wall strips, each	11@11½
Hemlock, boards, each	13
Hemlock, joist, 4x6, each	30
Hemlock, wall strips, 2x4	9½
Black walnut, good, ₱ M	85 00
Black walnut, ⅝-in	78 00
Black walnut, ¾-in	78 00
Sycamore, 1-in	28 00
Sycamore, ⅝-in	22 00
White wood, 1 inch and thicker	40 00
White wood, ⅝ inch	30 00
Ash, good	43 00
Ash, second quality	30 00
Cherry, good	60 00
Cherry, common	35 00
Oak, good	42 00
Oak, second quality	25 00
Basswood	25 00
Hickory	40 00
Maple, Canada	30 00
Maple, American	28 00
Chestnut	40 00
Shingles, shaved, pine..m	6 00
" " 2d quality	4 50
Shingles, extra, sawed, pine	4 25
Shingles, clear, sawed, pine	3 25
Shingles, cedar, mixed	2 75
Shingles, hemlock	2 00
Lath, hemlock	1 50
Lath, spruce	2 00

CLEVELAND.

ROUGH LUMBER.

Uppers, thick	$45 00
inch	42 00
Box, thick	36 00
inch	32 00
2½, 3 and 4 in clears special	
Flooring strips, 6 in, No. 1	34 00
2	24 00
Fencing strips, 6-in, No. 1	16 00
No. 2	14 00
Select common, thick	28 00
inch	24 00
Common	15 00
Culls	12 00
B. bds No. 1 12 in	25 00
No 2	16 00
No	14 00
No 1 18 ft	20 00
No 2 18 ft	18 00
No. 3 18 ft	13 00
Bill stuff to 18 ft	13 00
Bill stuff over 18 ft. adds 75c to $1 per ft. per M.	
Shingles, XXX	3 60
clear butts	2 60
Lath	2 25
Surfacing one side adds to the price of rough lumber	1 00
2 sides	1 00
Norway bds and strips	18 00
common	13 00

DRESSED LUMBER.

Flooring and drop siding clear	$40 00
box	30 00
select com	28 00
commom	20 00
Siding, ½ in. bevel clear	00
box	20 00
select common	15 00

Working lumber matching flooring and drop siding, $2; working ½ in. siding, $4.

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Gazetteer of British North America.

Containing the latest and most authentic descriptions of over 7,500 Cities, Towns and Villages in the Provinces of Ontario, Quebec, Nova Scotia, New Brunswick, Newfoundland, Prince Edward Island, Manitoba, British Columbia and the North-West Territories, and other general information, drawn from official sources, as to the names, locality, extent, ect., of over 1,800 Lakes and Rivers; a TABLE OF ROUTES, showing the proximity of the Railroad Stations, and Sea Lake and River Ports, to the Cities, Towns, Villages, etc., in the several Provinces, (this Table will be found invaluable); and a neat Coloured Map of the Dominion of Canada. Edited by P. A. Crossby, assisted by a corps of Writers. Subscribers' names respectfully solicited. Agents wanted. PRICE $3—Payable on Delivery.

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Montreal, August, 1880.

PUBLIC NOTICE.

ALL PERSONS NOW SQUATTED upon any Public Lands within the Nipissing Crown Land Agency are hereby requested to apply without delay to John S. Searlett, Esquire, Crown Land Agent at Nipissing, and have their locations carried out in due form, failing which their claims cannot be recognized by the Department.

THOS. H. JOHNSON,
Assistant Commissioner.

Departm't of Crown Lands,
Toronto, 13th Oct., 1880.

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QUEEN'S HOTEL.

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JOHN HIGGINS, Proprietor. The proprietor (late of Georgetown,) having lately purchased the above hotel, will endeavor to make it one of the best houses in the District of Muskoka. Tourists and hunting parties will receive every possible attention. Free 'bus to and from the steamboat wharf. Terms, one dollar per day.

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HENRY FRASER, proprietor (successor to Dougland Brown.) Mr. Fraser having purchased and thoroughly renovated and refitted that old established hotel, so long and popularly kept and owned by Dougald Brown, in the village of Gravenhurst, is now in a position to attend to the wants of the travelling and general public. Parties *en route* to the Muskoka District, will find "Fraser's" a comfortable stopping place. The Bar and Larder are well furnished. Convenient Sample Rooms for Commercial Men. Good Stabling and attentive hostler. Free 'bus to and from trains and steamboats.

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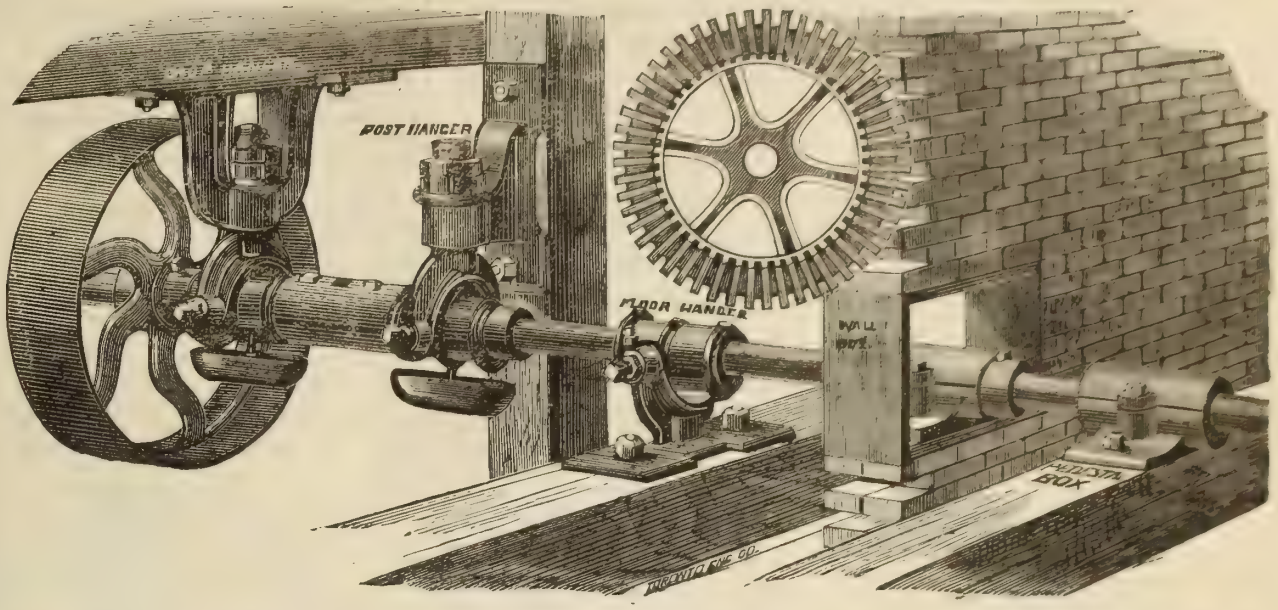

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SWORN STATEMENTS MADE BY LIFE INSURANCE COMPANIES TO THE CANADIAN GOVERNMENT.

NAMES OF COMPANIES.	TOTAL BUSINESS IN CANADA.		NEW BUSINESS OBTAINED IN '79.		POLICIES BECOME CLAIMS IN 1879.	DEPOSIT AT OTTAWA.
	Total Prem. re. in 1879.	Total Ins. in Force.	No. Pol. issu'd	Amount of Pol. Issued.		
CANADIAN.	$	$		$	$	$
Canada, Hamilton	536,293	18,945,715	1,402	2,633,100	157,821	54,000
Confederation	154,898	5,928,323	1,012	1,545,650	31,494	77,650
Sun, of Montreal	101,844	3,620,783	524	818,000	18,000	50,400
Ontario Mutual	62,537	2,151,413	427	490,000	11,500	50,541
Mutual, Hamilton	30,805	1,262,855	156	201,500	7,300	81,075
Citizens', Montreal	28,292	1,171,845	183	406,250	11,000	50,400
Toronto	4,674	163,609	19	17,606	1,000	29,160
BRITISH.*						
Standard	152,237	5,437,066	309	697,600	57,836	153,900
Lon. & Lancashire.	53,456	1,783,188	225	400,600	20,070	110,000
Brit. & Mercantile	26,989	1,019,224	6	38,000	39,057	Fire & L.
Royal	27,725	1,012,568	20	65,575	20,554	Fire & L.
Commercial Union	22,996	674,569	16	51,373	24,516	Fire & L.
Star	17,546	681,429	38	107,067	21,982	100,343
Liv., Lon., & Globe	10,136	286,004	7	15,433	1,117	Fire & L.
Queen	16,642	394,581	14	77,750	6,000	Fire & L.
Briton Life	4,094	106,910	6	10,500	2,000	54,993
AMERICAN.*						
ÆTNA LIFE	307,847	9,289,325	935	1,386,600	131,883	195,000
Equitable, of N.Y.	180,327	5,266,992	475	1,285,500	88,785	105,000
Union Mutual, Me	91,691	2,732,914	167	277,850	43,704	115,000
Travellers	89,691	3,072,782	215	336,150	10,830	126,100

*In examining the table it must be borne in mind that it relates only to business done in Canada. This comprises the *whole* of the business done by the local companies, but only the Canadian business of the British and American Companies. The Ætna's total income was **$4,350,897.30** in 1879.

☞ Of the $131,883 of "Policies become claims" in the case of the ÆTNA LIFE, **$53,764** was by the maturity of Endowment Policies—*i.e.*, policies payable at death or the end of 10, 15 or 20 years if living. In the other 19 companies, all combined, only a total of $24,943 of this excellent kind of insurance was paid in 1879.

$36,000 was added by the ÆTNA LIFE, the past year, to its Government Deposit, making it the largest of any Company, and nearly 4 times that of most Canadian Companies.

☞ The superior standing of the ÆTNA LIFE is shewn by its total income being **$4,350,897.30**, and by its Canada Branch income being nearly equal to the combined premium income of the whole 9 British Companies, or that of the 3 lesser American Companies, or that of all the Canadian Companies but one. This one has been 32 years getting $536,293, while the Ætna's $307,847 has grown from less than $1000 in the past 14 years.

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WILLIAM H. ORR, Manager.

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Interesting Trial of the 100-Ton Gun.

On Monday afternoon the 100-tun gun and the model *emplacement* in which it is mounted at the proof butts in the Government marshes adjoining the Royal Arsenal, Woolwich, where the objects of experiment, and the novelty as well as the importance of the occasion created considerable interest, as was manifested by the large number of officers and other visitors present. It was explained that the four 100-ton guns purchased of Sir William Armstrong some two years since are to be mounted on the defences of Malta and Gibralter, and that as it has been considered desirable to load them by hydraulic machinary, this experiment had been proposed in the hope of gaining some experience before proceeding extensively in permanent preparations. Elevated as the gun was, and pointed over the glacis of the parapet, it presented a most commanding aspect, and has probably never appeared to such advantage. More than 34 feet long, with the diameter at the breech of 6 feet 6 inches, tapering gradually off to 2 feet 6 inches at the muzzle, it had a more slender and less sturdy outline than that of the natural system of heavy ordnance, but its admirers praised it as the combination of strength and elegance, and claimed for it the advantages due to the saving of weight and metal. Size and weight appeared of no consideration at all when a lever was touched, and the bulky breach rose and fell as the muzzle was elevated or depressed with no more apparent effort than a 9-pounder requires at the hand of a gunner; and the admirable adjustment of the machinery when the whole mass swept grandly round to the opposite point of the compass was unanimously confessed. Then the order was given to load. A small elongated carriage or cradle stood on a miniature railway close at hand, and upon this were placed two cartridges and the shot. The charge was 425 lbs. of pebble powder, and it was made up into two cartridges for convenience of carriage; but a tube ran through both and just at the point of communication a small primer of small grain powder had been inserted for the purpose of igniting the charge in the centre. The projectile was a huge bolt 17¾ inches in diameter, and nearly 3 feet long, its weight being, with the gas check attached, 2,020 lbs., or nearly a ton. The cradle with its burden ran along the rails, and entered an iron turret about 12 feet in breadth. One side was an open fort, to which the muzzle of the gun on the outside descended. On a turn-table in the centre of the apartment the cradle revolved bringing the charge close up to the muzzle of the gun, when out from the other side rose the head of the rammer and drove cartridges and shot into the mouth, and rammed them well home. The rammer, which was a 6-inch piston 54 feet in length, is moved by hydraulic rams with a 4-feet stroke and multiplying gear, and it descends through a tube into the earth. The monster gun, as soon as it was loaded, was elevated clear of the parapet, and was trained about 15 degrees to the left, which brought it exactly opposite to one of the sand bags at the butts, the act of moving the gun at the same time automatically closing the iron door of the loading port, which is in like manner opened by the return motion. The gun is to be fired through the axial vent, and the electric wire is passed through an arrangement of copper discs which have been contrived with the long desired object of effectually closing the vent and saving the evil consequences which arise from the escape of powder gases. The spectators withdraw to a safe distance, and after an interval of suspense an appalling roar, which makes the earth vibrate, is heard and deadens the senses for a time, and the enormous gun is observed calmly sliding down from the recoil amid a cloud of smoke, dirt, and *debris*. The first anxiety was to examine the structure, and the inspection was perfectly satisfactory, for nothing whatever had suffered from the discharge, and the durability of concrete even for real fortifications had become a subject for consideration. In this work upwards of 3000 tons of concrete has been used, about half of which is below and half above the ground, the lower half being compounded of cement and Thames ballast, and the upper half of cement and furnace slag. The latter was prepared with great labour, owing to the difficulty of crushing the refuse metal, and it is believed that it would stand a fair cannonading as well as the famous Gozo coraline with which the Malteze works are constructed. The hydraulic lever at the Mediterranean ports will be furnished with an arrangement similar to that used in Monday's experiments an accumulation weighted up to 67 tons, with a 16-inch ram and an 8-feet stroke. This can be raised by a steam sapper, of traction engine, in one minute, or forty men can pump it up by hand in seven minutes. The one round fired on Monday, is but the first in a series of experiments of a similar character, and it will be some time before the gun leaves Woolwich for its final destination in one of the Mediterranean fortresses.—*Times.*

The Cabul Mint.

HOW AFGHAN MONEY IS MADE—ENGLISH RUPEES RECOINED.

[Cabul Letter to the London Times.]

Let me now describe the process through which the English rupees at present pass to bring them out from the Cabul mint in the shape of Cabulee rupees. In one of the rude sheds which I have described as, running round the court-yard, are two rows of small, round clay hearths, elevated an inch or two above the floor, and depressed, like a plate, in the middle. A pile of rupees—generally 300 is added to the furnace. The lead, in combination with the bone ashes, separates, as is well known, the alloy. This first protess converts the rupees into a dull, unsightly mass of silver, free, or nearly so, from alloy. The pure silver thus extracted is then carried to another shed, carefully weighed, and an amount of English rupees equal to its weight added to it. Rupees and silver are then melted together in a clay crucible, and the melted mixture is then ladled by hand into molds, which give it the shape of flattened bars about twelve inches long. These bars are then taken to a third shed, to be annealed by hammering, and given the form of slender, round rods. The next process is that of drawing these rods through a plate of iron, perforated with round holes, to give them a uniform circumference. This is done by means of a rude hand-wheel, after which the rods are cut by hammer and chisel into the lengths requisite to form the future rupee, each of which lengths is carefully weighed in a pair of scales. Any that are too heavy are handed to a workman whose business it is to slice off a fragment with his chisel; any that, on the contrary, are too light are handed to another workman, who notches the little cylinder by a blow on his chisel, and inserts the required fragment into the notch. The cylinders are next carried to a fifth shed, and, after gently heating, are hammered into small, round disks, which have a yellowish-white colour. To remove this colour and give them brightness they are next plunged into a caldron of boiling water, in which they are boiled for some time along with apricot fruit and salt. This process imparts brightness to the dull disks of silver, and they are then ready for the last process they have to go through, that of stamping. This is, perhaps, the most interesting part of the operation. Two operators sit facing one another, half naked, on the ground, with a little iron anvil between them. Into the face of the anvil is inserted a steel stamp, destined to give the impression which the under side of the rupee will bear. One operator places the little silver disks with great quickness and accuracy upon the stamp, and the other, who is armed with a heavy hammer in his right hand, and a steel stamp bearing the inscription destined for the upper side of the rupee in his left, with one heavy, well-delivered blow, impresses the device on the soft lump of silver. Lastly, each rupee thus stamped is again weighed, and deficiencies in weight made up by the same rude process.

Settling in England.

(From the Parisian.)

It is announced that the ex-Empress Eugenie has just bought the Farnborough Hill estate, in Hampshire, close to the borders of the county of Surrey, for £50,000. The estate was the property of the late Mr. Longman, the well-known publisher, and consists of about 257 acres, with a charmingly picturesque mansion, erected, by the late owner eighteen years ago. The ex-Empress will not go into possession of it until January, as Mrs. Longman, the widow, is very anxious to spend another Christmas there. A memorial chapel will be built to receive the bodies of the Emperor and the Prince Imperial. The lease of Camden Place expires in March next

An Oregon ranchman threw a lasso clumsily, and the noose fell around his own neck. Just then the horse unseated him, and, one end of the rope being fast to the saddle, he was choked to death.

You Have no Excuse.

Have you any excuse for suffering with Dyspepsia or Liver Complaint? Is there any reason why you should go on from day to day complaining with Sour Stomach, Sick Headache, Habitual Costiveness, palpitation of the Heart, Heart burn, Water-brash, Gnawing and burning pains at the pit of the Stomach, Yellow Skin, Coated tongue, and disagreeable taste in the mouth, Coming up of food after eating, Low Spirits, &c. No! It is positively your own fault if you do. Go to your Druggist———and get a bottle of Green's August Flower for 75 cents your cure is certain, but if you doubt this, get a Sample Bottle for 10 cents and try it. Two doses will relieve you.

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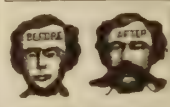

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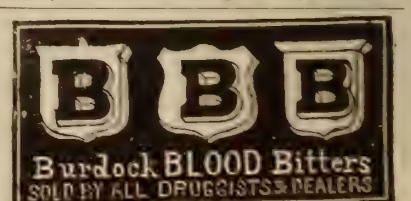

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A Roman Holiday.

(Rom. Cor. N. Y. Sun,)

The tenth anniversary of the capture of Rome was celebrated here on the 20th of September with more than ordinary rejoicings by the ministry and municipality.

When the Italian Government decided to seize Rome in 1870, after the recall of the French troops, Signor Giovanni Lanza was the prime minister. In parliamentary debate it has leaked out that he was then fearful of taking such a step, but that, his judgment having been overruled by sundry influential advisers of the crown, he at length consented to order Gens. Cadorna and Sixio to advance on the city of the popes. The bombardment of one of the gates, Porta Pia, having placed the defenseless city at their mercy. Signor Lanza at once put in a claim to all the glory of taking Rome, and he has steadily and sturdily maintained this claim. Since that memorable year of 1870, Italy has been immersed in a constant political turmoil, one clique of governing politicians giving place to another in quick succession. There have been no less than half a dozen ministries, Lanza, Minghetti, Depretis (twice premier), and Cairoli (now in his second administration) in turn held sway. The most statesmanlike quality these ministers exhibited was to keep themselves and their favourites in power by a series of hand-to-mouth expedients. Lanza and Minghetti, belonging to the party of the right, claimed to rule from a conservative point of view ; Depretis and Cairoli, at the head of the party of the left, put themselves forward as the champions of the people. Although supported by popular opinion and indorsed by Garibaldi, the two last premiers proved, in some respects, to be more royalist than the king himself, especially in court matters. Their deference to the royal prerogative and etiquette, and their failure to institute any popular reforms, notably that of the enlargement of the suffrage, were abundantly satirized by both the right and the left. In reality, they followed in the footsteps of their predecessors in religious, military, and financial affairs. While these four men claimed to be carrying out Cavour's policy of unification and consolidation, Ratazzi and La Marmora, the two leaders, who, in conjunction with the famous Piedmontese statesman, did most to found the new kingdom, were thrust aside, and died, as is generally believed, broken-hearted.

The transfer of the government to Rome in 1871 was disastrous to Florence, which, during seven years, had been put to great expense in preparing to become a capital. Its trade and society dwindled until the authorities had to suspend payment because the municipality was bankrupt. Only two years ago it was even contemplated to place the "City of Flowers" in the hands of a receiver ; and though this was not done, because the national government promised a help which has been only partially afforded, the financial plight of Florence remains deplorable,—its debts unpaid, and its paper dishonoured. Turin, the original capital, had been somewhat similarly damaged when it ceased to be the seat of government ; but then Turin readily recuperated, because it was a wealthy commercial centre, which Florence never was.

Upon the instalment of the royal court in the Quirinal, and of the parliament in the wooden structure hastily erected at Monte Citorio, the celebrated guarantees to the pope which had been voted at Florence were promulgated officially. In substance these guarantees, while declaring the government supreme over the newly-captured city, left the pope in possession of the palace of the Vatican, as a great personage entitled to privileges, and allotted him a salary of $65,000 a year. This salary has never yet been paid, because neither Pius IX. nor Leo XIII. would take it, and the amount has only nominally figured in the national budget ; if called on to pay its accrued total the government would be sorely pressed. The law of guarantees, with the exception of paying this salary—and the series of laws passed in 1873, confiscating a portion of the church property and abolishing the religious orders and fraternities in Rome, have been rigorously executed. Much of the confiscated property was sold at auction at merely nominal figures to government favourites and intriguing speculators.

The ten years' interval since 1880 has wrought changes in the new capital. At first the Romans were disposed to be jubilant, as unusual privileges were showered upon them at a stroke of the pen, and as, under the settlement in the Corso and Via Condotti of a host of bustling merchants' trade had a brisk send-off. The population was dazzled, and looked for wonders. But the tinsel of first appearances soon wore off when it was found that the promised prosperity had feeble foundation. What had been the support of the city suddenly ceased. The wealthy foreign visitors, who had been accustomed to spend their winters between the Coliseum and the Vatican, failed to put in an appearance or to furnish the "ways and means." There has consequently been no little misery and grumbling among the citizens, reduced to live off the driblets vouchsafed by government employees and cheap tourists, travelling for the most part with small satchels instead of big trunks. Owing to the influx of settlers in the wake of government and court, the population amounted, according to the census taken on Dec. 31 of last year, to 301,680, showing an increase of 75.000 in the last decade. From the very commencement of the new era, rent, provisions, and clothes, and living in general grew dearer. Gold and silver vanished early, and are never seen now as in the days when the foreign world distributed so lavishly the precious metals. Trade and manufactures have not, so far, been built up extensively, except among a small minority of the citizens. The ruins have been excavated, restored, repaired ; new houses built ; entire quarters put up by a syndicate of speculating capitalists, old ones demolished or freshly washed, and new streets run, until the city's old picturesqueness has been seriously curtailed. From a modern point of view, of course, numerous improvements have been made. At the same time, as Rome was not built in one day, neither can it be pulled down in a day, and the modernizing process has not gone so far but that an abundance of the antique is left to maintain the city's reputation as the richest of curiosity shops. The municipality has been chiefly at the expense of constructing new streets—foremost among which is the Via Naziona's—and in establishing public free schools, which are now more numerous and better managed than those of any other Italian city. The pupils learn with a remarkable aptness, and the younger generation of Romans, unlike their fathers and mothers, will start in life with a fair amount of elementary knowledge. The children of the nobility and upper classes of Roman society are still invariably educated in the Roman Catholic schools.

A decade with Rome as capital has rendered a change very perceptible in Italian society at large. It has, above all, become far more practical and less impressionable than in the ante-revolutionary war. Uniformity of aims and methods has already levelled those individualisms which were formerly established landmarks in town and country. Even the peasantry have joined in the modern chase after comfort, and, no longer content to vegetate in their poverty-stricken districts, are emigrating in swarms to both Americas in search of fortunes. Not so much to the density of population in the kingdom, numbering now twenty-seven millions of inhabitants, is this emigration due, as to the awakening of a new spirit which has rendered the old starvation unpalatable.

But the completion of Italy's long-coveted unity has within the last ten years doubled its debt. Its currency of paper money is at a discount of 15 per cent. ; taxes and deficits are yearly on the increase. The finances have been wretchedly mismanaged since Cavour's death, the expenses being many times over what they should have been. The excuse has been wars, great armies, and works of internal improvement, such as the Mont Cenis and Gothard tunnels, docks, ports, ships, and railroads. In constructing them the Italian legislators and financiers acted as if several Californians were under their thumb, and, indeed, as if no bills were ultimately to be presented for payment. An army and navy, increased out of all proportion to the requirements of the nation, continue to drain the national exchequer, and no prospect of stopping this drain is seen to glimmer even faintly on the horizon. Withal it is amusing to see with what levity the ministerial organs at Rome touch upon the national indebtedness. "Baron Rothschild, of Paris," said one of them, lately, "spoke very encouragingly of our finances." He must have spoken, then, with a view to his own pocket, or to get possession of a portion of the country as collateral for the money the rulers borrowed from him and dissipated.

THE London, Sevenoaks, Tunbridge Wells and Brighton coach horses, eighty in number, were sold by Messrs. Tattersall, on Sept. 20, and realized $18,500.

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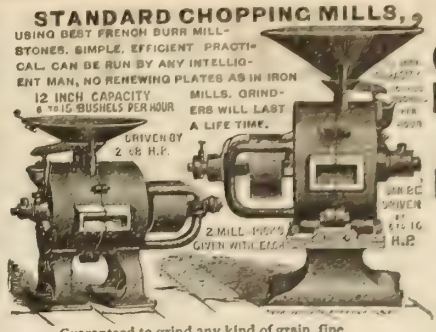

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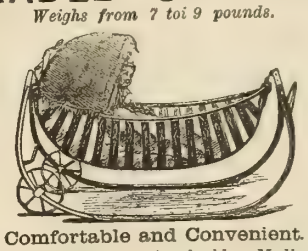

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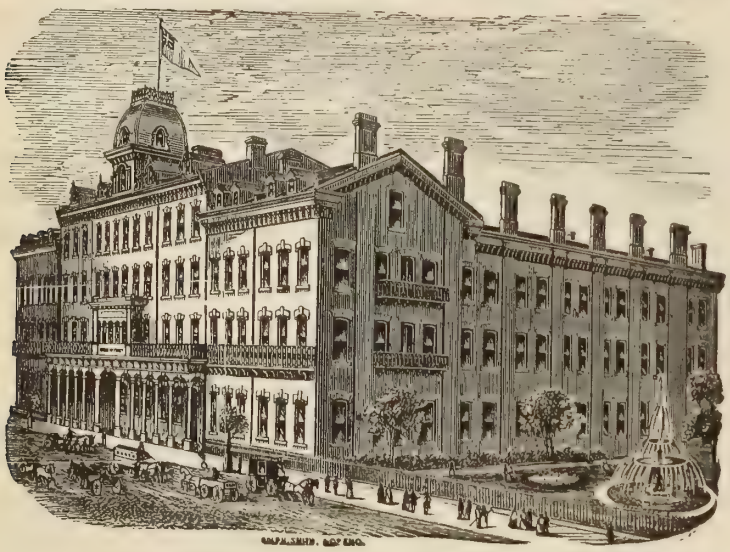

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VOL. I.—NO. 3. TORONTO, ONT., NOVEMBER 15, 1880. PRICE FIVE CENTS.

PROSPECTUS.

The CANADA LUMBERMAN is now introduced to its patrons, and so far has met with a favourable reception.

Before its publication a large number of lumber and timber merchants and mill owners in the Provinces of Ontario, Quebec New Brunswick, and Nova Scotia, and manufacturers whose line is to supply machinery for mills, saws, axes. files, oil, belting, sleighs, &c., were consulted in reference to the advisability of publishing such a journal.

Their opinion was that such a publication could be made highly useful to parties engaged in the various branches of trade above alluded to, as well as to those more directly interested in the mines and minerals of Canada.

Acting on their suggestions, THE CANADA LUMBERMAN has entered on this extensive and important field, with an adequate sense of the responsibility of the undertaking; and whilst craving leniency until fairly under way, we may repeat a portion of our introductory, viz: nothing shall be wanting on our part to make this journal a full and complete record of the lumber business, and all that relates to the trade in Canada. To this end the latest market reports, the contributions of trustworthy correspondents, trade circulars, etc., will be freely used, to give our readers the best, the earliest, and most reliable information that can be ascertained, concerning the important branch of business to which the journal will be especially devoted; while the mining, the milling, and the manufacturing interests will receive attention proportionate to their great claims on the public.

In short, it will be our endeavor to make THE LUMBERMAN worthy of its title in every respect; and, while giving special attention to the great staple industry to which it is devoted, it will also furnish a carefully selected amount of general reading that will make it a welcome visitor in every family.

Advertisers, especially those dealing in mill, mining, and lumbering supplies and machinery, will find THE LUMBERMAN a very favourable medium of reaching their customers, as it will circulate among these classes, and receive more attention from them than they have the time or inclination to bestow on a general newspaper.

The success of the LUMBERMAN must depend on the support it will receive from the classes above referred to; we trust, therefore, that they will overlook shortcomings at the commencement, and accord to the enterprise their generous and hearty support.

MORE TREES.

Scribner's Monthly says:—We do not remember any article in this department of the Monthly which has proved so prolific of beneficent results as one which was published four years ago, on "Village Improvement Societies." It was responded to from Maine to Texas, gave rise to a great deal of enquiry, and resulted in the establishment of a large number of associations for the beautifying and improvement of village property and life. One of the most important of all the improvements inaugurated was the setting out of trees for shade and beauty and profit; and this is so important a matter, from an economical point of view, that it deserves a special article. The appearance of Mr. B. G. Northrop's papers on "Tree-planting" and "Forestry in Europe" makes the writing of the article both easy and pleasant. Mr. Northrop has done a great service to the country in collecting and disseminating information upon these subjects, and we know of no man who has done, or is doing, so much as he to beautify and enrich the State which honours him with the charge of her educational interests. Such a man is a treasure to Connecticut, at any price, and he will not fail to be remembered, when the results of his foresight and enthusiasm shall become apparent and established, as a great public benefactor. More than fifty village improvement societies have been established in Connecticut, mostly through his agency, and he has gone up and down the State, making public addresses on the topic, until the public mind is fully awakened. We can do our readers no better service than in turning over the pages of information and statistics he has furnished, and quoting freely from them. In illustration of the great interest attached to forestry abroad, it is stated that, previous to 1842 there had appeared in Germany 1,815 volumes on the subject of forestry, and that an average of one hundred volumes on that subject are published in that country every year. There are more than 1,100 volumes on forestry in the Spanish language. In America, the great question has related to the best and quickest methods of getting our forests out of the way. We have done nothing but cut and burn our wood. Destruction has been the end aimed at, and the end has been only too well achieved. In the Old World, the effect of the destruction of forests has been very carefully and intelligently traced, and this effect should give America pause at once in her suicidal policy. To strip a vast realm of its trees is to change its climate from a soft and moist one to a dry and harsh one, to dry up its streams, with all their capacities for irrigation and navigation, and to transform a fertile soil into a barren waste. It is declared that Tunis and Algiers were once fertile regions, supporting a dense population. Their decadence is largely traceable to the destruction of the forests. Rentzsch ascribes the political decay of Spain to the same cause. Hon. George P. Marsh says: "There are parts of Asia Minor, of Northern Africa, of Greece, and even of Alpine Europe, where causes set in action by man have brought the face of the earth to a desolation as complete as that of the moon, and yet they are known to have been once covered with luxuriant woods, verdant pastures and fertile meadows." Mr. Marsh is trying to impress upon America the importance of arresting the work of destruction going on within her borders, and the facts which he adduces from Persia and the farther East may well excite our profound alarm. Regions larger than all Europe are now withdrawn from human use, though they once flowed with milk and honey.

In the discussion of this matter of the destruction of forests, we have never noticed any competent allusion to the agency of railways. Mr. Northrop tells us how many ties must be produced to furnish our 85,000 miles of railway, viz., 34,000,000 sleepers per annum. These are astonishing figures, but nobody talks of the consumption of wood for the production of steam-power in locomotives. Nearly all the railways of the country, passing through wooded districts, use wood for steaming just as long as the line will produce it. The consequence has been that a railway is a scourge to all the forests within five miles of it. The hills and valleys are stripped bare. A tornado ten miles wide, destroying everything in its path for the entire distance, would not be more disastrous to the forests than a railway throughout its length. Hundreds of thousands of acres of beautiful woodlands, that were the nursing homes of streams and the mothers of climatic salubrity and balm, have been burned up in the locomotive furnace, and the hills and valleys where the forests stood are baking in the sun.

A world of mischief has been done already in America, and now, of course, the question is, "What is the remedy?" The first answer is, "Stop destroying." Wood must be cut—that is true; but it is not necessary to cut it clean, unless the land is needed for cultivation. Timber must be felled for building and manufacturing purposes; but it is not necessary to denude the land and burn it over. Large tracts of undisturbed forests should be left, and then, when the work of destruction has been perfected, we must begin and plant forests and let them grow. The American is not a patient man. He is particularly desirous to see the result of his toils and his expenditures in his lifetime. To plant a forest, which it will take fifty or sixty years to mature, seems like that so good an investment for one's family cannot be made as an investment in the growth of a forest. Mr. Northrop quotes Dr. James Brown as saying that he has seen crops of larch, of sixty-five years' standing, sold for from $700 to $2,000 per acre, from land that was only worth originally from $2 to $4 an acre. It has been calculated by a competent authority that a plantation of ten acres of European larch, to last fifty years, will produce a profit of thirteen per cent. per annum, and give a net profit of $52,282,75! Mr. Sargent, director of the Botanic Garden and Arboretum of Harvard College, calculates that there are 200,000 acres of unimproved land in Massachusetts, which could at once be covered with larch plantations with advantage, and that, if so planted, their net yield in fifty years would be considerably more than a billion of dollars. Mr. Northrop advises the Connecticut farmers to plant white ash; but Grigor says: "No tree is so valuable as the larch in its fertilizing effects, arising from the richness of its foliage, which it sheds annually. The yearly deposit is very great, the leaves remain and are consumed upon the spot where they fall."

Farmers who want information for practical use should send to Mr. Northrop for his book. Lands are various, and have their special adaptations of certain kinds of trees. All trees, however, are trees of life, whose leaves are for the healing of the acres. If a farmer have a sterile pasture, let him remember that the way to make it fruitful at the least expense is to plant it with trees. Trees have a chemistry of their own for dissolving the elements of the rock in the crevices of which they will grow. Spread a throwing away life; but it is demonstrable sterile pasture with shade and strew it with leaves every year, and a good piece of land will be made of it for those who succeed the planter, while the crop of trees will pay all expenses and leave a handsome profit.

When we remember what a wonderfully beautiful object a tree is, how important a part it plays in all our landscapes, how useful it is in the arts and economies of life, and how beneficial it is in its climatic influences, we do not wonder at the enthusiasm with which specialists regard it, and the zeal with which such a man as Mr. Northrop pushes its claims upon the popular attention. If all communities would give themselves up to his leading, and share in his devotion, they would do a good thing for themselves and for the country. As for him we hope he will not become weary with popular indifference, and that, if necessary, he will be willing to wait as long as it takes a tree to grow for the reward which is sure to come to his memory.

THE light at the entrance to Byng Inlet, Georgian Bay, Muskoka District, Ontario, has been removed to a new building erected upon Gereaux Island, about half a mile N.E. ½ N. from its old position. The light is a fixed white catoptric, elevated 47 feet above water mark, and should be visible 12 miles from all points seaward.

A Benevolent "Old Salt."

On a certain winter's day, not many years since, an uncommonly cold northwestern blistered the Atlantic coast. Over toward the sand-dunes which protect a particular bay from the sea a man is fighting his way across the frozen surface in the face of the bitter gale. His objective is a house on the midland near the shore. The contrast between the luxurious warmth and coziness of the interior of this house and the cold desolation which prevails without would furnish ample material for the modern artistic "symphony" in color. After a hard struggle the man reaches the shore; under his arm flutters a paper parcel.

He enters the kitchen of this particular house, and with merely a nod to the cook seats himself in silence by the fire. He is perhaps sixty years of age—an ancient mariner whom many battles with the elements have rendered uncommonly reticent and uncommunicative. His head is bald, but an enormous tuft upon the chin makes amends for this deficiency, and adds to the grim solemnity of his appearance. At a recent revival, after fifty years' practical contemplation of life in various portions of the globe, he experienced religion. Friends and his dead wife's mother had hoped that under this soothing influence he might develop more genial methods of expression; but he was a man, as we have said, in whom experience had confirmed a natural reticence. When the moment arrived in which by some sign or word of mouth he was, before the assembled multitude, to show his ripeness for grace, a great silence fell on the congregation. With no change of countenance he arose in his place, faced to the northeast, the point from which he had always encountered the hardest gales, and roared out, as if addressing a man at the mast-head, "Look a here! I want religion, and I'm bound to have it!" This said, he dropped back into seat, silent, and grim. No change was observed in his deportment; he had satisfied the exigencies of the conventional village life. Under no influence could he be induced to alter or soften the angles of his brief but emphatic vocabulary. On the particularly cold day which I have mentioned he was moved by another sentiment, for snugly tucked in blankets on the upper floor of the house in which he was then seated, a newly born infant lay sleeping. From the mother, surrounded by every attainable luxury and comfort, this ancient mariner had once accepted a signal service, for which, up to this time, he had never given any sign of appreciative recognition. On this occasion for twenty minutes or more he sat by the fire grimly ruminating. Finally he started up, and taking from under his arm the package which he had thus jealously guarded during the entire session, he advanced and placed it on the table.

"Look a here," he said to the cook, "I understand Y——'s woman" (*Anglice* wife) "is hove to with a baby"—here he paused, and nodded assent to his own statement, in the direction of the northeast. "Look a here" (confidentially), "wimmin is mighty onsartain at them times, so I fetched this 'ere off the beach, a-thinkin' she might like suthin' sorter tasty." This said, he reseated himself in solemn silence by the fire. An examination of the "suthin' sorter tasty," which was enveloped in a thoroughly thumbed copy of the county paper, revealed a well-sanded salt mackerel—a waif washed on the beach from a recent wreck off the coast.

A Gambler's Method of Winning.

A German baron, who had been playing heavily at "makao," at the Pesth National Casino, and had, during a few months, won $40,000, was discovered cheating recently in a very curious way. He always appeared anxious to "take the bank," by which means he of course always dealt. He kept down the pile of bank-notes in front of him with a polished silver tobacco-box. He dealt over this, and could thus see the cards he dealt his players reflected in the lid of the box! A certain general of the staff observed this, and begged for the loan of the box to roll a cigarette. This request he frequently repeated, and observed that when the box was away the baron had variable luck like the others. The lucky gambler, a well-known racing man and of excellent family, is to be prosecuted as a common swindler.

LAST week a professional man addressed an Irish artisan, who was waiting in his hall, rather brusquely. "Halloa, you fellow, do you want me?" The answer was neat: "No, your honor, I am waiting for a gentleman."

ABOUT EMINENT PEOPLE.

NINA BOUCICAULT, the youngest daughter of Agnes Robertson, is said to be predestined for an irresistible soubrette actress. She is receiving her education to that end in France and Germany, is small in stature, small-featured, has a *nez retrousse*, and fine hazel eyes.

THE present voyage of the Prince of Wales's sons includes Madeira, Brazil, the Falklands, San Francisco, Vancouver's Island, the Sandwich Islands, China, and Japan. Their great--great--grandfather, George III., never even saw the sea until he was 50.

KING LUDWIG of Bavaria, who in council sits and makes his ministers stand, often wakes his old chamberlain at three o'clock in the morning to play billiards, and if he dares to yawn he is soon made to feel the weight of the royal displeasure.

MISS MINNIE HAUK has been spending her vacation in the south of France, Switzerland, and the Black Forest. She is now to sing through the principal Continental cities, after which she contemplates a season of concerts in London and the Provinces, as other English towns are styled.

MR. LONGMAN, the well known publisher of London has sold his estate at Farnborough Hill to the ex-Empress EUGENIE for $250,000. It consists of 257 acres and a picturesque mansion. The ex-Empress intends to build on the property a memorial chapel to receive the bodies of the ex-Emperor and the late Prince Imperial.

IT is related as characterizing the parties given by Lady Borthwick that at one of them there were present the Duke of Cambridge, the Princess Mary and the Duke of Teck, the Grand Duchess of Mecklenburg, the Crown Prince of Austria, Prince Ibrahim of Egypt, Midhat Pasha, Stanley and Cameron, the African travellers, and that at the same one Lady Waldegrave became acquainted with the Prince Imperial and Count Schouvaloff.

MR. CHILDERS, First Lord of the Admiralty in England, has been making his holiday tour in Ireland, accompanied by his family. There have been spontaneous demonstrations in all the towns through which he has passed in the west and south of Ireland, and innumerable addresses have been presented. Personally unknown in Ireland, Mr. Childers has received these compliments as the representative of Mr. Gladstone's Government

LORD VERNON, the father of Archbishop Vernon Harcourt, and great grandfather of Sir William Harcourt, was walking one day with a little boy, the son of his parkkeeper, in his park at Sudbury in Derbyshire, when a stag ran out from a herd of red deer, and desperately attacked him. Lord Vernon caught his assailant by the horns, and held him with great difficulty while the little boy, aged seven years, groped in his master's pocket for a penknife, with which, following Lord Vernon's instructions, he cut the stag's throat, dividing the jugular vein.

MR. RUSKIN will soon find himself unable to visit Venice, as well as America, for æsthetic reasons, as they propose to put steam-launches on the canals there. But he may be well content to stay at his beautiful home; it is called Brantwood, and is situated among the waters and mountains of the English lake country. His house is full of treasures, valuable manuscripts, among them that of Scott's *Peveril of the Peak*, ancient missals exquisitely ornamented, paintings by Titian and by Meissonier, Sir Joshua Reynold's Portrait of Angelica Kauffman, and a unique collection of Turners.

OFFENBACH had a taste for magnificence, and liked truth in the material order of things. It was his cherished ambition to found a theatre in which there would be no shams. After the war he realized his wish, and was ruined by it. La Gaite was his Abbotsford. Stage accessories in Gounod's "Jeanne d'Arc," "La Haine" of Sardou, and "Genevieve de Brabant" were what they professed to be. In a short time the manager had to liquidate and to sell his stage accessories at a loss of 87 per cent. He with difficulty met the demands of his creditors, and he would have been obliged to pass through the Bankruptcy Court if his wife had not placed in his hands a treasure she had hoarded unknown to any one. A very large number of persons believed he had the evil eye, the terrible *Jettattura* of the south of Italy. The well-known poet and critic, Theodore de Bannville, is said to have always carefully avoided mentioning the name of M. Offenbach in any of his articles for fear of evil consequences.

Pecuniary Independence.

We talk a great deal about our political, intellectual, moral, and social independence: all the world has heard us talk about them. We do not enjoy them as much, perhaps as we think. How much independence of thought has the journalist, for instance, who must bid for an audience, the author whose first thought must be never to displease a reader the orator who must repeat the stock notions of his hearers, the professor who has to reconcile evolution with theology; how much liberty of action has the voter who depends upon a government salary, or who is in a politician's employ? We can not very seriously blame these people, to whom independence often means starvation. What I want to set in clear light is this: that independence in life and thought depends, more than we like to believe, upon pecuniary independence; it is not to be had by wishing merely. Individuals there are, and always will be, who will suffer for their moral or intellectual independence; but communities will be what circumstances make them. This again, I want to set in clear light: that we are as a community, deficient, in spite of all our national wealth, and unnecessarily deficient, in the best part of independence—the power to *enjoy* our lives. In this respect we are behind our friends in France, with their two millions of people living upon their incomes.

These two millions of people are not, for the most part, either idle, or frivolous, or wealthy people. Many of them live in the cities, but more of them are quiet people living on their modest properties in the country, and enjoying their competence in a rational way—enjoying friendships, social pleasures, family affections, and all the kindly observances of home life in a way that we have little idea of—in away that the tourist of Paris sees nothing of. We have much to learn from the French, and among the things that we have to learn are some that may surprise us. One of these things is the comfort, the unity, and the permanence of French homes. The French home and family, their happiness, their unity, their permanence, these have been developed by the combined industry, thrift, and domestic sentiment of the most intelligent people in Europe, and especially by its great middle class. We have the significant testimony of Prince Bismark "that the French nation has a solidity such as no other nation of Europe enjoys." and Mr. Matthew Arnold, from whose *Mixed Essays* I quote, adds: "This can only come from the broad basis of well-being, and of cause for satisfaction with life, which in France, more than in other countries, exists." If we had two millions of people, or one million, who were enjoying a competence, earned or inherited, can it be doubted that we should be a happier people, and a better one, than we are? France and the United States have this important feature in common—in each country nearly one-half of the people live directly by agriculture; but our country homes and families have not attained the comfort or the permanence of these—T. M. COAN, in *Harper's Magazine for November*.

Milk Poisoned by Sewage Water.

(From the Liverpool Post.)

What appears to be a terrible case of milk poisoning is reported from Rochdale. There has been an alarming outbreak of typhoid fever in the town lately, upward of twenty persons being infected, of whom eight are known to have died. From investigations made it seems that the families in which the deaths occurred were all supplied with milk from a particular farm. An examination of the farm premises in question led to the discovery that there was a well under the kitchen in which sewage water was found, while in front of the farm buildings was a cesspool in a filthy state. The borough medical officer of health, at an inquest of one of the victims of the poisoned milk, said no doubt the milk from the farm in question, polluted by the sewage water, had caused the outbreak of typhoid fever which proved so fatal.

THE apparent cause of the downfall of John A. Woodward, who has absconded with $82,000 from the Boston city treasury, was an actress known as Imogene. Her maiden name was Amy Louise Knowlton. He fell in love with her, married her, maintained her in a costly home when she stayed in Boston, and paid the heavy losses of her unsuccessful tour as a star. The Boston *Herald* says that some of the bills which Woodward had to meet were for breakage in hotels when his wife got drunk.

GENERAL.

"I AM satisfied with my lot," said a real estate owner who held a piece of city ground worth $5,000 a foot.

THE Earl of Cawdor and party, numbering six guns, recently succeeded in bagging the extraordinary number of 566 hares in one day. Gamekeepers and gillies were, of course, unable to carry them, and they were conveyed to the castle in carts.

DEAD Lake, in California, is peculiar in having no visible outlet, though a large stream runs into it. The Indians believe that it is bottomless and marks the spot where a wicked tribe once sank into the ground. No Indian can be induced to go near it.

AN important piece of patronage is likely to fall this year into the hands of the Emperor of China. The Grand Lama of Thibet, the personified god of the country, is dangerously ill, and the priests have addressed a memorial to the Emperor of China praying him to elect a successor to whom the dying Lama can impart his divine attributes, or rather his soul, which is supposed to be that of Tzon Jappas, the founder of this branch of Buddhism. The nomination of a successor remains with the Emperor of China as suzerain of Thibet, and the appointment, if it may be so called, is a valuable one, the income of the Lama been over $2,000,000. The Lama lives in a magnifient palace, the roof of which is covered with gold, and in it there are several hundred idols of the same metal.

LONDON has a police force of 10,911 men, and furnishes a large field for their work. During the past ten years 190 persons have been killed by light wagons, and 7,962 wounded; 474 killed and 4,144 injured by heavy carts; and omnibuses and street cars have killed 151 and injured 1,655. Each year there are nearly 10,000 children and more than 3,000 adults reported to the police as lost or missing. Last year about two-thirds of the children and one-fifth of the adults were found and restored to their friends by the police; the remainder returned home, or were found, dead or alive, with the exception of 141 adults and 25 children, of whose whereabouts no intelligence has ever been received. Last year 259 persons committed suicide, and 404 others attempted self-destruction, but were prevented from so doing.

THE last survivor of the Medusa has just died at Bordeaux. Cæsar Alphonse Henry was born at Paris in 1813, and three years afterward his father embarked in the Medusa with his whole family of eight persons. Every one knows the fate of the Medusa. Of its living freight of 450 souls, 175 were put on the raft which Gericault has rendered memorable in his picture, 16 remained on board, and 260 took to the boats and gained the African coast, nearly 100 miles from the French settlement at St. Louis. The Henry family were among these last. The three-year-old child walked part of the way across the burning, waterless sands; part of the way he was carried by the sailors. The little caravan strewed its route with corpses, but the survivors arrived safely at St. Louis, and among them was the Henry family, safe and well from the eldest to the youngest—a result mainly due to the remarkable energy of the father.

A LION tamer in a menagerie at San Francisco gave a *Chronic* reporter some cruel facts about the training of beasts. He said there was real danger in the business. He had seen two men killed, and was badly bitten once himself; but he charged these mishaps to carelessness and too much mercy. "You learn to tell," he explained, "what kind of a temper the beasts are in, and conduct yourself accordingly. It ain't hard to dodge them. If they spring straight at you all you've got to do is to jump a little on one side, and if they dive high for your throat you dive under 'em. There's never more than one goes for you at a time, and that don't occur often. The wild ones are better and safer. This is because a lion used to a cage and to being poked and teased is less afraid of you. I'd sooner handle ten lions just from the jungles than one that's used to the public. When I first got into a cage of untamed ones I'd have a fire near by, with three or four iron rods in it, red hot. If the beasts go for me, the men stand ready to jab the irons into their mouths and make 'em let go." He scouted the idea that lions could be governed except by fear, excited by inhuman treatment. He tried never to err on the side of gentleness, and had recently killed a lion by striking it a little too hard on the head.

Sea Music.

The tide rises, the tide falls,
The twilight darkens, the curfew calls;
Along the sea sands damp and brown
The traveller hastens toward the town,
And the tide rises, the tide falls.

Darkness settles on roofs and walls,
But the sea in the darkness calls and calls;
The little waves with their soft white hands
Efface the footprints in the sands,
And the tide rises, the tide falls.

The morning breaks: the steeds in their stalls
Stamp and neigh as the hostler calls;
The day returns, but nevermore
Returns the traveller to the shore,
And the tide rises, the tide falls.

The Birthday.

OF THE BABY MADE FAMOUS IN DICKEN'S AMERICAN NOTES.

The Gentleman who, while a baby, was unconsciously immortalized in Charles Dickens' "Notes" of his trip to St. Louis was met yesterday by a Republican reporter. It was the gentleman's birthday, and that circumstance led to the disclosure of facts comparatively little known regarding the identity of characters described in the "American Notes" of the great novelist.

The pretty little scene on board the boat between St. Louis, as printed in the "Notes," was of the most charming and soul-felt pictures of character and emotion that ever warmed the heart in fact or fiction, and Forster said that of all the writings of Dickens, it was Lord Jeffreys' favourite passage.

In a letter to Forster, dated on board the boat, April, 1842, Dickens gives the story, which for freshness excels the printed account in the "Notes," and its publication will be new to many. It runs as follows:

THE LITTLE WOMAN.

"There was a little woman on board with a little baby; and both little woman and child were cheerful, good-looking, bright-eyed, and fair to see. The little woman had been passing a long time with a sick mother in New York. The baby had been born in her mother's house, and she had not seen her husband (to whom she was now returning) for twelve months. Well, to be sure, there never was a little woman so full of hope, and tenderness, and love, and anxiety, as the little woman was; and there she was, all the live long day, wondering whether he would be at the wharf, and whether he had got her letter, and whether, if she sent the baby on shore by somebody else, he would know it, meeting it in the street; which, seeing that he had never set eyes upon it in his life, was not very likely in the abstract, but was probable enough to the young mother. She was such an artless little creature, and was in such a sunny, beaming, hopeful state, and let out all this matter clinging close about her heart so freely, that all the other lady passengers entered into the spirit of it as much as she did; the captain (who heard all about it from his wife) was wondrous sly, I promise you—inquiring every time we met at table whether she expected anybody to meet her at St. Louis, and supposing

SHE WOULDN'T WANT TO GO

ashore the night we reached it, and cutting many other dry jokes which convulsed all the hearers, but especially the ladies. There was one little, weazen, dried-apple old woman among them who took occasion to doubt the constancy of husbands under such circumstances of bereavement and there was another lady (with a lap dog) old enough to moralize on the lightness of human affections, and yet not so old that she could help nursing the baby now and then, or laughing with the rest when the little woman called it by the father's name, and asked it all manner of fantastic questions concerning him in the joy of her heart. It was something of a blow to the little woman that when we were within twenty miles of our destination it became clearly necessary to put the baby to bed, but she got over that with the same good humour, tied a little handkerchief over her little head and then came out into the gallery with the rest. Then, such an oracle as she became in reference to the localities, and such facetiousness as was displayed by the married ladies, and such sympathy as was shown by the single ones; and such peals of laughter as the little woman herself (who would just as soon have cried) greeted every jest with. At last there were the lights of St. Louis, and there was the wharf, and there were the steps; and the little woman, covering her face with her hands and laughing or seeming to laugh

MORE THAN EVER.

ran into her cabin and shut herself up tight. I have no doubt that in the charming inconsistency of such excitement she stopped her ears least she would hear him ask for her; but I didn't see her to do it. Then a great crowd of people rushed on board, though the boat was not yet made fast, and was staggering about among the other boats to find a landing place; everybody looked for the husband and nobody saw him, when all of a sudden, right in the midst of them—God knows how she ever got there—there was the little woman hugging with both arms round the neck of a fine, good-looking, sturdy fellow. And in a moment afterwards, there she was again dragging him through the small door of her small cabin, to look at the baby as he lay asleep. What a good thing it is to know that so many of us would have been quite down-hearted and sorry if that husband had failed to come."

THE BABY

It will be a surprise to many in St. Louis to know who were the parties so feelingly touched by the pen of Dickens. The baby alluded to, which has since grown up to manhood, is Mr. Charles R. Garrison, the eldest son of a well-known citizen, D. R. Garrison, Esq. The "little woman," the mother of Chas. R Garrison, died about six years ago. Her name was Annie Noye Garrison, and her father, Richard Noye, was a native of Plymouth, England. He was a local Methodist preacher, and resided many years in Buffalo, New. York., where his son, John T. Noye, still resides, the proprietor of the largest burrmilling establishment in the United States. Mr. Charles R. Garrison, aforesaid "baby," was 39 years old yesterday, having been born in Brooklyn, N. Y., October 12, 1841. His mother brought him by way of Pittsburg, and, taking a Ohio river steamer for St. Louis, they had unawares fallen in with and had their little history embalmed by the pen of Dickens.

Mr. Garrison has no memory of the event described by Dickens, but as he grew up his mother frequently rallied him on the figure he cut in the "Notes."

About Wine.

The five principal brands of Bordeaux wine are the Chateau d'Yquem, the Chateau Laffitte, the Chateau Margaux, the Chateau-Latour, and the Haut Brion. The Chateau and the domain of Yquem belong to the family of Sur-Saluces, who bought it in 1785 from the Seigneur Sauvage d'Yquem. The domain covers 360 acres, about two-thirds of which are flanked with the vines which yield the wine. The average yield of the best quality is 120 barrels of 200 gallons each, and the prices realized vary very much; for while the vintages of 1859 and 1861 were sold for $1,200 per barrel, those of 1858 and 1867 fetched little more than half the sum. Chateau Laffitte belongs to the Rothschilds, to whom it was bequeathed by the lat Baron James de Rothschild, who purchased it in 1867 for $828,000 the average annual yield of Chateau-Laffitte is 180 barrels of 200 gallons each, and of this 140 barrels are first-class wine, fetching as a rule 1,800 per barrel. Chateau-Margaux is of verv ancient origin, the site of the present house being that of a fortress belonging to the family of Montferrand. Vines were not planted on the domain till 1750, and in 1802 the property was purchased by the Marquis de Laconilla, who pulled down the old castle and built a very handsome chateau, which was bought by Count Aguado in 1830. He sold it for $1,000,000 to a Paris banker, M. Pillet-Will, three or four years ago, the Margaux domain yields upon an average 155 barrels of wine, each being worth from year to year $1,600. Chateau Latour, the joint property of MM. de Flers, de Beaumont, de Graville, and de Courtevron, the descendants of the Segur family, belonged in the seventeenth century to a secretary of Louis XIV.; and this vineyard, the produce of which is nearly all exported to England, yields about 90 barrels of first-class wine. The vineyard of the Chateau-Brion, which belongs to M. Amedee Larrien, covers about 120 acres, and now grows about 100 barrels of first-class wine.

The price of the Haut-Brion and the Chateau-Latour may be put a trifle lower than the Chateau-Margaux; so that, taking these five vineyards, one will not be far wrong in estimating that they yield 645 barrels for 129,000 gallons), worth, when purchased immediately after the vintage, a million of dollars.

MIRTHFUL MORSELS.

To live long—grow tall.

THE mule understands the art of heeling.

SONG of the mouse: "Hear me gnaw ma."

A TWO-foot rule—making "rights" and "lefts."

A BEGGAR set up business the other day with a small sign reading, "help wanted."

"THERE is no place like home," repeated Mr. Henpeck, looking at a motto, and he heartily added: I'm glad there isn't."

WHEN girls are young they like half a dozen birthdays a year; but as they grow old they don't care to have even one.

THE difference between a goat and a Scotch-man is this: The one delights in cold oat meal and the other delights in old coat meal.

TAKEN together, all the beauties of art and nature do not interest the inquisitive female so much as the view she gets through a keyhole.

AUTUMN gilds the leaf. Of course she does. That's her business. If she didn't we'd get some sort of a machine to do it for her and dock the old gal's wages.

RECITATION room—Professor: "X., do you know the meaning of that word?" X. hesitates. A whisper. Professor: "your friend is right."

ISN'T it kind o' curious that no woman goes to the telephone to answer a ring without wondering if her hair is all right and her train in proper shape?

A COUNTRY girl visited a music shop, and asked for "The heart boiled down with grease and care," and "When I swallowed home-made pies." The attendant at once recognized what she desired.

DURING his recent visit to Hamilton the Marquis of Lorne was treated to a fifteen-minute address in ancient Gaelic. He is now prepared for a visit from his mother-in-law.

SOME tasteful individual very correctly remarks that the best lip-salve in creation is a kiss; the remedy should be used with great care, however, as it is apt to bring on an affection of the heart.

COUNTRY schoolmaster: "How many hens have you?" Boy: "Well, one died, and the other didn't live." Schoolmaster: "Then you have none?" "Oh, yes, we have got six that ain't hatched yet."

CHEMISTRY recitation: Professor—"what is water?' Student. "water is an article used as drink." Professor, interrupting—"Can you name any of its properties?" Student—"Well it occasionally rots boots" *Exeunt omnes.*

WHEN a Yankee is struck by a thunderbolt and knocked endways clear across a ten acre lot. the only great regret he feels, upon recovering consciousness, is the disheartening fact that he can't capture the bolt and exhibit it for money.

"'PEARS to me your mill goes awful slow," said an impatient farmer boy to a miller. "I could eat that meal faster 'n you grind it." "how long do you think you could do it, my lad?" quoth the miller. "Till I starved to death," replied the boy.

CHARLES FOX and his friend Mr. Hare, both much incommoded by duns, were together in a house, when, seeing some shabby men about the door, they were afraid they were bailiffs in search of one of them. Not knowing which one of them was in danger, Fox opened the window, and, calling to them, said: "Pray, gentlemen, are you Fox-hunting or Hare-hunting?"

PROF. OLDBERG, of Washington, recommends various changes in the pharmaceutical nomenclature, which are vigorously opposed by the druggists, who don't propose being swindled out of their godlike prerogative of charging extra for their Latin, and putting down five cents worth of potash as ten cents worth of potassa pura, misc, cum nihil, id est omnes, dissolved in aqua, fifteen cents extra.

"AN acute observer," said Dr. Borum, "can easily detect the nationality of a man. Now, one could easily tell that yonder fellow unloading the cart was Hibernian." Here the horse twisted his head around and threw off some of his harness, and the unloader shouted: "Make pehave yourself mit your head dere, you tuyftll, vill you?" which rather shook the doctor's reputation as a physiognomist.

PAT—"Och, Bridget, did ye niver hear uv my great spache afore the Hibernian society?" Bridget—"No, Pat, how should I? for shure I was not on the ground." Pat—"Well, Bridget, ye see I was called upon by the Hibernian society for a spache; and, be jabbers, I rose with the enthusiastic cheers of thousands, with me heart overflowing with gratitude, and me eyes filled with tears, and the divil a word did I spake."

"ARE seeds of the future lying under the leaves of the past?" is the very pertinent inquiry of the knowledge seeker. There may be; or it's barely possible that the seeds of the past are lying under the leaves of the future or the leaves of the future may be lying under the seeds of the past; or the seeds of the leaves may be lying under the future of the past—at any rate, something is lying, and if you expect to get through a heated political campaign like this without it, there's where you dispose of yourself.

A GENTLEMAN who has a bill against Gilhooly has been bothering that distinguished Galvestonian for weeks for a settlement. The other day he called on him and said: "Now, Mr. Gilhooly, I want you to tell me when you will pay that bill." "didn't I tell you I was going to pay it ultimately?" "Yes but I want to set some day, so I can make my calculations." "I'll pay it ultimately." "Can't you be more definite? When will you pay it ultimately?" "Well, I will pay it d—d ultimately. Now, I hope you are satisfied."

LORD REDESDALE, somewhat shabbily dressed, as is his wont, recently went to see the foreign minister on business. Knocking at the door, he was received by the footman, who, without knowing who Lord Redesdale was, informed him curtly that Lord Granville was not at home. "But look 'ere," continued the flunky, "just run and get me a pint of 'arf and 'arf, will you,"—producing a jug. "Certainly." replied Lord Redesdale, and, taking the jug, away he toddled for the beer. Bringing it back he handed it to the footman, who first of all took a regular quencher. and then Lord Redesdale, politely declining the offer of a drink, quietly remarked: "Oh, by the by, when your master comes in tell him that the earl of Redesdale called to see him!" You may imagine how the footman felt at that sublime moment. and how Lord Granville conveyed his displeasure to him when, after hearing the anecdote told amid roars of laughter in every club he went into, he arrived at home and had an opportunity of hearing the flunky's explanation.

Rare Elephants.

There are now on exhibition in New York two peculiar elephants brought from the mountains of the Malay peninsula, about 800 miles from Singapore. They are remarkable for their small size, being respectively 28 and 36 inches tall; and for being covered with a thick coat of bristly hair or wool. They are supposed to be from five to seven years old. In size they resemble the extinct elephants of Malta, and in covering, those of Siberia. Their woolly coat is attributed to the circumstance that they live high upon the mountains where the climate is cold. The species appears to be all but unknown to naturalists, this pair being the first that have survived the passage through the heated low country to the coast and the subsequent journey by sea. The sailors on the steamer which brought them—the Oxfordshire, Captain C. P. Jones—named them Prince and Sidney. They are described as playful and harmless, and they keep their little trunks stretched out to strangers to be petted. They love to be scratched on the under side of the trunk close to the mouth, and they hold their trunks curled back over their head as long as any one scratches them. Like elephants of larger growth, they keepup a swaying motion, either sidewise or forward and backward. When a visitor lets one of the little fellows take his hand he delicately curls his proboscis around it and carries it gently to his mouth. Then he trumpets his satisfaction.

JOHN BUTLER, a tramp, had seen better days. Finding himself hungry and destitute in St. Clair County, Ohio, he resolved to revenge himself upon those prosperous farmers who had since morning refused to feed him. Stealing a horse from a stable, and some matches from a barroom, he rode away to perform his strange task. During a ride of two miles he set fire to seven barns all of which were destroyed. The line of incendiarism would doubtless have been extended much further, had he not been promptly pursued. He was caught while kindling the eighth fire.

The Gatineau River.

This important river joins the Ottawa river from the north, a short distance below the city of Ottawa, and nearly opposite to where the Rideau river joins the Ottawa from the South. It has for many years been the outlet of a vast timber trade, and still operations are carried on towards its head waters very extensively. The principal firms now carrying on the lumber business "up the Gatineau," are Hamilton Bros., Gilmour & Co., and G. B. Hall & Co. The latter firm has a branch depot and farm on the Desert river. The farm comprises 800 acres, of which 250 are under cultivation, employing 14 permanent farm labourers, under charge of Mr. A. Mooney. The saw mills belonging to the firm of G. B. Hall & Co. are complete and extensive, and are situated at Montmorenci Falls, below Quebec; the logs therefore have to be brought down the Gatineau, and rafted on reaching the Ottawa river—thence floated down the Ottawa and St. Lawrence to the mills at Montmorenci. Only the choicest logs are thus rafted, those of an inferior quality are sold for local consumption. About twenty-six million feet of logs are annually sent on to the Montmorenci mills.

Messrs. Gilmour have extensive mills down the water at Chelsea, about 8 miles from the city of Ottawa and 9 miles from the confluence of the Gatineau with the Ottawa river, and also an extensive and complete steam saw mill on the west bank of the Gatineau river, at its mouth. This latter establishment is driven by a 250 horse-power engine, and has 3 slabbing, and 3 stock gates and one large circular saw for dimension timber, together with lath, picket and shingle machines. The capacity of the mill is about 130,000 feet per day. About 20 million feet of lumber are turned out during the season. A portion of the supply of logs are obtained up the Ottawa river and the balance come from the Gatineau. Most complete arrangements are made to prevent fire. A large Selby fire engine works in connection with a cistern, which is placed on a tower 50 feet high, and which supplies pipes laid through the lumber yard, with hydrants at convenient points. The docks are large and built on piles. About 10 million feet of lumber will be held over this winter. Of the Chelsea mills we shall have more to say at a future time. We shall also refer to the mills of Messrs. Hamilton Bros. at Hawkesbury.

New Brunswick.

We have pleasure in acknowledging receipt of the nineteenth report of the Surveyor-General (Hon. M. Adams) of New Brunswick, for the year 1879. It is full or information—important and interesting to the people of the Province. The readers of the LUMBERMAN will be pleased to know that although, on account of the continued depression of the lumber trade during 1878 and 1879, which caused a large deficiency in the local revenue, a change for the better, as predicted by the Surveyor-General, in his report, had taken place and a great revival in this industry has produced the most gratifying results amongst the people. The renewals for licenses for cutting timber and the annual general sales for the year were small—the total number of square miles sold being only 107, at the rate of $8 per mile. The amount paid in to the Government to renew licenses is given at $15,016, being for 1877 square miles at the rate of $8 per mile. The principal lumbermen, in New Brunswick, according to the official statement are as follows. The subjoined table shows the the superficial contents of the spruce and pine logs cut by each of the largest operators—over 175, in all, as given in the official list:

	Pieces.	Feet.
Adams & Co.	47,268	4 203,876
Cushing & Clark,	11,690	1,169,582
J. & S. Farley,	19,164	2,079,458
A Gibson	12,169	1,098,616
G. G. King	26,017	2,473,328
Alex. Morton	13,694	1,554,415
Wm. Muirhead	51,456	5,008,287
Alex. Morrison	15,070	1,746,001
Geo. McLeod	71,634	7,421,899
John McLaggan	19,075	1,514,549
Hugh McLean	17,482	1,762,146
J. D. Ritchie & Co.	43,264	4 132,606
J. B. Snowball	158,123	17,980,680
Stephenson & McGibbin	36,595	3,108,600
P. R. Whitney	20,890	2,593,000
John Young	28,923	3,180,555
Total taken out	854,247	88,856,803

Also pine timber, 1,010 pieces, equal to 868 tons; besides hemlock logs, 810 pieces, equal to 92,750 feet, and cedar logs, 38,323 pieces. The statement is certified to by J. A. McCallum and Edward Jack, Official Lumber Agents. It will be interesting to compare the statement of 1880 with the former year.

Winnipeg.

The Winnipeg *Times* gives an extended list of the building operations in the City of Winnipeg during the current year. The number of houses erected is stated to be 261; the cost of which amounts to nearly one million dollars. If counted by tenements the number would reach 400 dwellings and stores. The city covers a site of about 2,000 acres or nearly three square miles. The assessment in 1874 was a little over $2,000,000, last year it reached the sum of $4,690,160. The taxation rate is given at 15 mills on the dollar. After the Red River troubles had been suppressed, more than ordinary attention was directed to the North West, and a tide of immigration set in, which gave Winnipeg its first impetus as a rising city. Manitoba was constituted a Province, with Winnipeg as the Provincial capital. This gave a metropolitan character to its place. In November 1873 the city was incorporated, at which time the population did not exceed 2,000—now it numbers about ten thousand souls. In 1870 the place was known as Fort Garry, the chief trading post of the Hudson's Bay Company, and a population of about 300, the majority of whom were half-breeds and Indians, employed by the Hudson's Bay Company. The carrying trade of the country has increased immensely, consisting of general merchandise, agricultural implements, stock, furs, coal, wood, lumber, immigrants' effects, and farm products of all kinds. A large amount of lumber has been towed in barges from the saw mills on a number of rivers that flow into Lake Winnipeg. Three brick yards have been established during the year, which with one previously in operation, must have manufactured 3,000,000 bricks this season. There are two grist mills, one foundry and machine shop, six steam saw mills and lumber establishments, two breweries, two malt houses, one distillery, two cigar manufactories, a soap factory, a biscuit factory, and thirty-four hotels. The principal contractors and builders in this, city were Hugh Sutherland & Brothers.

Belleville.

The latest from Belleville is, that lumbering operations on the River Moira, are going on vigorously. The principal operators on the river are, H. B. Rathbun & Son, Millpoint; Gilmour & Co., Trenton; also Sutherland, Caniffton, and William Sutherland, of the Steam Mills, on the bay, two miles east of Bellleville. Messrs. Rathbun and Gilmour are also operating on the River Trent, and their cut of logs this season will make about twenty million feet of lumber for each. Messrs. Sutherland will each take out about three million feet.

The following quantities are reported as being shipped under the Customs' supervision this season, from the port of Belleville, up to 1st Nov., viz.: Lath, 8854 M, $2498; Hop Poles, $264; Heading, $1404; R. R. Ties, 6500 pcs, $1815; Lumber, 11,393,000, $110,828.

Mr. A. Waters, harbour master, reports that the barley shipped this season from Belleville will overrun 600,000 bushels, whilst only 465,000 bushels were shipped in 1879.

Trenton.

The Customs report shipped from the Port of Trenton, up to 18th Nov. 1880, as follows;

Lath, 3,563 M.	$3 494
Lumber, 23,190,000 feet	292 669
Staves, 1,171 M.	3 809
Stave Bolts, 150 cords	450
Pickets, 31 M.	230
Other woods	3 170
	$303 822

Montreal.

At the port of Montreal last week the season for lumber export was reported as about closing, yet a large quantity of lumber remained on the wharves at Hochelaga. There were four more ships to be loaded to complete the season's shipments. Two were loading at Hochelaga, and the other two are expected there daily. It is necessary, however, it is stated, that the balance of the lumber should be sent away to some more sheltered place than the Hochelaga wharves offer before the setting in of winter. The New York Lumber Company, to whom it chiefly belongs, are at present employing barges and like craft to convey it to New York. It was expected the lumber will be removed during the next two weeks.

Napanee.

Up to 1st Nov. 1880, the Customs report shipped from the Port of Napanee, which includes Mill Point, as follows:—

Lath, 23,189 M.	$9 728
Plank, &c., 19,607,000 feet	163 708
Shingles, 3,420 M.	6 060
Staves, 352 M.	720
Stave Bolts, 390 cords	701
R. R. Ties, 75,913 pcs	15 723
Other woods	4 959
	$201 599

The Chaudiere.

From Ottawa we learn that the last lumber barges for the season were loading on Monday, 8th inst. The Chaudiere saw mills are yet running, and will not close as long as the present soft weather continues. The stock of lumber on hand for wintering is comparatively small, and is principally sold. Next week we intend to give a short sketch of the extensive saw mills at the Chaudiere.

Rice and Cheese.

We all know that rice is very nourishing and wholesome; indeed, it is said to constitute the chief food of one-third of the human race. Rice and cheese cooked together are excellent. For this we take any quantity of rice—say half a pound. Wash it well, for if rice is well washed in the first instance it is not so likely to burn afterward. Put it in a saucepan with cold water to cover it, and bring it to a boil, then drain it and return it to the saucepan with a pint and a half of milk, a little pepper and salt, and a piece of bread and butter about the size of a fourpenny piece. Let it simmer gently till it is tender, and if necessary add a little more milk, but it ought not to be moist. While it is boiling prepare a quarter of a pound of grated cheese. Grease a dish with bacon fat; spread the rice and cheese upon it in alternate layers, the cheese forming the uppermost layer. Put a little more bacon fat over all, and put the rice in the oven to brown. Serve as hot as possible.

THE NORTH WESTERN LUMBERMAN.—We have pleasure in referring to this excellent journal, and propose to make it a model for the CANADA LEMBERMAN. Of course it will take some time to come up to this standard, but it is best to "aim high." Our big brother says, that for 1880-1 it will more than ever merit the title of "the first trade journal in the world." So mote it be. "The Lumberman's Directory" is the title of a useful book, compiled and published by W. B. Judson Esq., editor of the "North Western Lumberman." It locates every saw and shingle mlll, of any account, in the great white pine districts of the North West, and South of the Ohio river. This work must prove of great value to all connected with the lumber trade in those regions. A similar work is much needed in Canada.

THE four best shots in England, outside of professionals, are the Earl De Grey, Lord Walsingham, Lord Huntingfield, and the Maharajah Duleep Singh. Lord Dacre, Lord Leicester, Lord Henniker, Lord Ripon, and Lord Hartington are also regarded as good shots.

MINING NEWS.

THE HIBBARD ANTIMONY CO.

A company bearing the above title has recently been organized in New Brunswick, with a capital of $650,000 divided into 130,000 shares of $5 each, and $100,000 in the treasury.

Among the shareholders of this company, says an exchange, may be found some of the most influential capitalists of Boston. Hon. W. B. Fowle is President, Hon Francis Hibbard of New Brunswick, Lewis Coleman, Stephen N. Stockwell and Thomas F. Temple of Boston, Directors, and J. W. Kimball, of Newton, Secretary and Treasurer.

The company has completed the purchase of the valuable mining property formerly owned by the Lake George Antimony Company, situated in the parish of Prince William, York County, N. B., and the title deeds have been passed and placed on record. The President and Directors have just returned to Boston from a visit to the mine and express themselves as greatly pleased with the developments and prospects of the company.

The property of the company consists of 900 acres of land, on which there are extensive deposits of antimony ore. The buildings, machinery and other improvements have cost over $70,000. Although this property is fully equipped with all necessary machinery for doing a large mining business, the new company is removing everything which falls below the present standard, and are replacing the same by the latest and most improved inventions, among which is one of Bradford's celebrated concentration works, which will be in operation in a few weeks, and is guaranteed to concentrate 30 tons of ore in 10 hours.

No less than six shafts, or slopes, have been sunk on the property, ranging in depth from 40 to 130 feet, all of which develop very rich ore in great quantities. The veins are true fissure veins, dipping to the north at an angle of about 45 degrees. At the surface they are from three to four inches thick, and increase in thickness and purity as they descend, till, at a depth of 130 feet, the vein or lode is 36 inches thick and of remarkable purity, assaying 75 per cent. pure metallic antimony.

Two of these veins have been opened about 75 feet apart, and have been traced on the company's property for considerably more than a mile in length. Four gangs of men are now at work in the shafts, taking out very rich ore, and, after some further preparation, the company expect to employ over 100 men.

The property is situated in the midst of a large farming district, where supplies of every kind are abundant and cheap; hard wood can be bought, laid down at the mine for $1.25 per cord, and the usual price of labor is $1 to $1.25 per day.

The mine is three miles from navigable water on the St. John River, and only six miles from railway communication by a leve road, now in course of construction. The ores or smelted metal can be shipped from the port of St. John, N. B., to any port of the United States or England at a trifling cost. The supply of antimony for the past 50 years has been derived almost entirely from the Island of Borneo, but this supply is now running short, while the demands and uses for the article are increasing on every hand, so much so that this company has received no less than three inquiries from large dealers in England, wanting to know if they could obtain anything like a large supply of antimony in this country. A written offer has been received from one of these parties, the largest smelter and dealer in the article in the world, offering to enter into a contract for 500 tons of antimony ore per month for a period of three years, on a basis of about $110 per ton for such ore as this mine will will produce, payable in cash on delivery; and, when it is remembered that this ore can be mined and laid down at the port of delivery at less than $30 per ton some idea can be formed as to the immense profits that will accrue to the stockholders of this company. Another very important feature in this enterprise is that it has passed through all the experimental stages of uncertainty and doubt, and has now become an assured fact, a reality that can hardly fail to produce the most gratifying results.

CAPE BRETON OIL REGIONS.

The Cape Breton Oil and Mining Co., is thus referred to by the Port Hawkesbury *Beacon* man, who has been visiting this location. He says: the "Cape Breton Oil and Mining Company"—of which Major Smith is

manager—have up a splendid rig on the land just across the road from the widow McDonald farm, and we were permitted to see the drill in operation, and also witnessed the performance of "drawing the tools," pumping, etc. When we were there the drill had gone down about three hundred feet—the result of a few days' work, and it is calculated that the well will be completed in about three weeks. Mr. Thomson, the operator, considers the indications good, and hopes to obtain a show of oil very soon. The derrick is 25 feet in height; the drill cuts an eight inch hole, and is worked with a cable—a system of drilling, which, although new in Cape Breton, is the favorite in the great Pennsylvania oil fields, and is said to be the most effective mode of sinking wells. The well-house contains all the necessary equipments for saving labor, and the great machinery is worked by operators Thomson and Murray, with a few assistants, in an astonishingly smooth manner. The writer further says—"The Bay View House," Whycocomagh, thirteen miles distant from the oil location, presents the appearance of a veritable Mining Exchange just now. While we were there on Friday and Saturday last the following gentlemen directly interested in the Cape Breton oil and mineral fields made the "Bay View" their headquarters: Dr. Rae, Mineralogist, of New York; Mr. Roberts, of Boston, owner of the Bay of Fundy stone quarries; Mr. Fowle, of Fowle & Carroll, Boston, who is largely interested in the Oil Company of which Mr. Loughead is manager; Mr. Theodore Hale, a mining expert, recently from Colorado, and who has explored the mining districts of Nevada and California; Capt. Nelson, of Halifax, who anticipates operating upon territory held by him in the vicinity of the Lake. J. S. Loughead and Major Smith, are the resident managers of the oil wells at the Lake.

A syndicate of Boston capitalists has been formed for the purchase of a valuable mining property on Chaudiere River, in the Province of Quebec. This new corporation is to be capitalized at 50,000 shares, and will be known as the Boston and Chaudiere Gold Mining Company. Work on the property is to be commenced immediately.

Mr. Munson is shipping thirty cars of iron ore per week from the Sexsmith mine at Madoc, and Messrs Coe & Mitchell make a weekly shipment of twenty-five cars from the Hematite mine, and will increase this shortly to fifty cars weekly. The Seymour mine is also being worked extensively.

OTTAWA VALLEY.

Mr. Garrett, geologist, Ottawa, states that a mine of red jasper, banded with beautiful yellow tints, has lately been developed in the township of Hull, and the jasper being a silicate is capable of receiving a fine polished surface. This mineral is used chiefly for urns and jewellery.

Mr. Garrett also reports the discovery of a galena mine, in the Township of Fitzroy, bearing pure ore at 80 per cent. The deposit is said to be large and not many miles from the city of Ottawa.

A very extensive deposit of iron pyrites is also reported, at Le Faivre village, from which ten thousand tons could be supplied forthwith, at a very moderate cost, as the mine is said to be within one mile of the Ottawa River. This is very opportune, as, should the French capitalists now in the Ottawa Valley region buying up large quantities of Phosphate of Lime, as well as phosphate mining locations, for the purpose of manufacturing superphosphates, commence work on the large scale proposed, the iron pyrites will come in just at the right time and place.

THE RAINS AND THE LUMBERMEN.—We (St. John *Sun*. Nov. 2) understand that the great rains have had the effect of bringing to the ponds of the Bay mills, from St. John to Albert County, all the logs which had been hung up awaiting a freshet. Those mills will accordingly have a good Fall's sawing.

We also learn that the Grand Falls jam of logs started again yesterday at 3 p.m., and the logs were running all the rest of the afternoon. A telegram to the *Sun* states that the Arostook Falls jam had broken and the logs were running past Andover at 9 yesterday morning.

DOM PEDRO, Emperor of Brazil, wished to test a certain railroad brake. He had one adjusted to a car, and started off for a trial trip. The engineer soon saw what seemed to be a big rock on the track ahead, and applied the brake, stopping the train within a few feet of the obstacle, which proved to be of pasteboard.

The Greatest Steamships of the World.

[N. Y. Journal of Commerce.]

The Great Eastern, 18,916 tons, 2,600 horse power, was built at London, begun in 1854 and finished in 1858, by J. Scott, Russell & Co. Length 670 feet 6 inches, breadth of beam 82 feet 8 inches, depth of hold 45 feet 2 inches; owned by Great Eastern Steamship Company, London and Liverpool. It is difficult to state her precise cost, since the company engaged in her construction failed soon after she was launched and before she was fitted up and sold the hull (if we remember rightly) for £160,000, much less than it had cost. We once saw a statement that she had cost, when ready for sea, $3,880,000, but we have no means of verifying the figures. The total loss of money on this steamer up to 1875 was estimated at one million pounds sterling.

Arizona, 5,147 tons, 1,200 horse power, built on the Clyde in 1879, by J. Helder & Co. Length 450 feet 2 inches, breadth of beam 45 feet 4 inches, depth of hold 35 feet 7 inches.

City of Peking, 5,079 tons, 1,000 nominal horse power (effective 4,500), built by Delaware Shipbuilding Company, of Chester, Pa., in 1874. Length 450 feet, breadth of beam 48 feet, depth of hold 38 feet 5 inches. Owned by Pacific Mail Steamship Company, New York.

City of Tokio, 5,079 tons, 1,000 nominal horse power (effective 4,500), built by J. Roach & Son, Chester, Pa., in 1874. Length 402 feet 8 inches, breadth of beam 46 feet 9 inches, depth of hold 36 feet 6 inches. Owned by Pacific Mail Steamship Company, New York.

Germanic, 5,008 tons, 760 nominal horse power (effective 3,500), built by Harland & Wolf, at Belfast. in 1874. Length 455 feet, breadth of beam 45 feet 2 inches, depth of hold 33 feet 7 inches. White Star Line.

Hooper, 4,935 tons, 400 nominal horse power; built on the Tyne in 1873 by C. Mitchell & Co. Length 338 feet 2 inches, breadth of beam 55 feet, depth of hold 34 feet 6 inches. Owned by Hooper Telegraph Works, London.

Faraday, 4,908 tons, 500 nominal horse per; built on the Tyne in 1874 by C. Mitchell & Co. Length 360 feet 4 inches, breadth of beam 52 feet 3 inches, depth of hold 34 feet 7 inches. Owned by Liemens & Co., London.

There are also between 40 and 50 other ocean steamers ranging between 4,000 and 5,000 tons. The Hooper and Faraday were both built for cable laying, but are now employed in general freighting business. The Furnessia, launched at Barrow 20 inst., is the largest steamer now afloat next to the Great Eastern, but the cable telegram announcing her launch does not give her dimensions. She is an Anchor line boat. The steamer Alaska, now building on the Clyde for Guion line, is to be 6,500 tons. Her owners say that "her dimensions will be; Extreme length, 500 feet; breadth of beam, 50 feet, and depth of hold from main deck, 38. There will be 150 state-rooms in the first cabin, and the saloon will accommodate 350 passengers. The second cabin will contain berths for 50 persons and on the after end of the main deck will be be quarters for 120 steerage passengers. The Alaska will have a capacity for carrying 2,000 steerage passengers if necessary. Her engines will have a greater power than those of any vessel now sailing the Atlantic. She will be a great improvement on the Arizona, of the same line, which is now the fastest ocean steamship afloat. Her boilers will be heated by 54 different furnaces. The Alaska will, in good weather, be able to cross the Atlantic in six and one-half days. No expense will be spared in trying to make her the finest as well as the swiftest, steamship plying between Europe and New York. She will carry four masts and will be provided with two smoke funnels."

Besides the above there are now building the City of Rome, for the Inman line, to be 8,500 tons; the Servia, fer the Cunard Line, to be 7,500 tons, and the Catalonia for the same line, to be the same tonnage. The White Star Line have also a new steamer building to be named the Majestic, to be larger than any of their ships now afloat.

THE London *Telegraph* says that in consequence of the advance in value of many securities held by the Glasgow Bank, the liquidation is likely to show much better results than were at one time anticipated, and those shareholders who have met their calls in full will be handsomely remunerated.

Wood Pulp.

There is an extensive demand growing up in England just now for wood pulp, and Mr. James I. Fellows, the inventor of the hypophosphites tonic, sends from the city of London to the St. John *Sun*, several items regarding the enterprise. We have no doubt but that the business might be made profitable in Canada, and Mr. Fellows's hints, if adopted may prove useful in time. Wood pulp being cheaper than rags for the manufacture of paper, its superior advantages in the material point of economy must be at once apparent. Indeed so great are these advantages that we are told, no wood country should ignore them. Pure water and good water power are essential, Mr. Fellows says, for the manufacture of this article, which is now revolutionizing, in a measure, a particular branch of industry and trade, The ordinary "soft" woods, such as poplar, basswood, white wood, spruce, fir, cedar, pine, as well as birch maple and hemlock, may all be used with the greatest economy and advantage. Norway, Germany and Sweden, have for several years enjoyed this trade, and have found ready markets in England and in France. There seems no good reason why Quebecers should not embark in an enterprise which promises steady business and large returns, particularly as it is an undertaking for which we are particularly well fitted in every way. The French purchase pulp with only 8 per cent of moisture, while in England no objection is made to buying an article which is composed of 50 per cent of moisture.

In the manufacture of pulp a power equal to one hundred horse is required; a drying house and steam rooms are also necessary. Mr. Fellows believes that saw-mill power could be better and more profitably employed in this new work, than in making deals or boards. "The immense banks of saw dust annually now burnt or set afloat in the streams," he adds, "could be worked into this industry."

The *Printer and Stationer* of London says with regard to the mode of manufacture of this article:—

"The wood in the forest is cut in lengths of 5 feet. The bark is taken off by hand, in order to be done most carefully. In this state the wood is sent to the mill, where it is once more examined, so that no dirt or bark may follow it into the machines.

"The first operation in the mill is the mechanical cutting procedure, performed in a strong and extremely powerful cutting machine. The wood is cut in lengths of ½ to ⅝ inches, and then crushed in a large bast mill.

"The boiling of the wood is done in three horizontal cylindrical rotary boilers, of 5 feet in dia., 32 feet long, holding about one ton of dry pulp each, revolving on six rollers, making one revolution in about three minutes. The pressure used is about 110 to 130 lb. per square inch.

"When the pulp is boiled the unboiled knots are taken away by rotary knotters. The washing of the pulp is done in rag engines, the knives of which only beat, but do not cut the fibre.

"When the pulp is washed, it once more passes through some very fine knotters, of the usual model; then it comes to the sand traps, pulp presses, drying cylinders, and pulp cutters, and then it is ready for packing.

"The black liquor is evaporated by the company's own system. About 75 or 80 per cent of the caustic soda used is, by this system, recovered.

"The fuel for the mill is peat, and some wood. The peat is taken from their own peat bogs. The peat making, in summer time, occupies four steam engines and one water wheel, representing about 60 horse-power, fourteen peat machines, and about 160 workmen. The pulp mill occupies about 100 people, and the power used is about 100 horse-power. The pulp is packed with iron ropes and hessian, into bales of 1-10th of a ton gross weight. The production is about 100 to 105 tons per month.

"The price in the English market ranges from £10 to £12 10s. per ton, and prices are advancing."

From all we can learn on this subject, the more are we satisfied, that it presents a most attractive side to the capitalist. Even coarse saw dust may, with advantage, be utilized in the manufacture of the pulp. We hope our readers will look into this question, and see if a new industry cannot be started that will provide work for many operatives, and at the same time, open up a new channel of trade with England and France. The matter will bear close investigation.

"Hew to the Line."

A LUMBERMAN'S SONG.

Going through the woods my lads
The ringing axe we swing,
And as we ply our merry toil
This cheery stave we sing:
"Let true eye guide each sturdy stroke
True heart and hand combine;"
And "wheresoe'er the chips may fall,
Hew to the line!"

Life's a bush of varied woods
And cross is oft their grain,
But axe and wedge will cleave the knots
And part the log in twain.
The line of duty, fairly traced
By Nature's own design,
Will keep us straight, my lads if we
Hew to the line.

Hard our lot as lot may be,
Spare our fare at best is,
Yet our slumber's sounder far
Than his, who wears a crest is.
This one honest rule we seek,
In shadow or in shine,
"Aye, wheresoe'er the chips may fall
Hew to the line."

He who wields the trusty steel,
To hew a path through life,
Must bear a single heart to guide
His action in the strife.
Then let us pray that, come what may,
This law be yours and mine,
['Tis His, who bosses all the gang],
"Hew to the line."

CHORUS, Hew to the line, my lads
Hew to the line!
Wheresoe'er the chips may fall
Hew to the line!

Captain Eads' Ship Railway.

The *Scientific American* of this week contains two full page illustrations of Captain Eads' proposed railway for transporting ships with their cargo across continents.

Captain Eads claims by his plan to be able to take loaded ships of the largest tonnage from one ocean to another across the Isthmus of Panamr, as readily as can be done by a canal after the Lesseps plan, and at a much less cost for engineering construction.

The project is certainly bold end ingenious, and the projector anticipates no serious difficulties in carrying forward his enterprise. The engravings referred to in the *Scientific American* show the proposed construction of not only the railroad, but the appliance for transferring the ships from the water to the rail.

In addition to the large number of engravings, illustrative of engineering works, inventions and new discoveries which appear weekly, the *Scientific American* has, buring the past year, devoted considerable space to illustrating and describing leading establishments devoted to different manufacturing industries.

This feature has added very much to the attractiveness and usefulness of the paper. More than fifty of the most important industrial establishments of our country have been illustrated, and the processes of the different manufactures described in its columns. The *Scientific American* has been published for more than thirty-four years by Munn & Co., 37 Park Row, N. Y., and has attained a larger weekly circulation than all similar papers published in the country. The publishers assure the public that they have not printed less than 58,000 copies a week for several months.

Shooting at Baloons.

English papers report some experiments, lately made at Dungeness, which show remarkable success in reducing the efficiency of military ballons. An ordinary service baloon was used, and after it had risen to a height of 800 feet was fired at with an 8 inch howitzer at a distance of 2,000 yards. The gunners were not instructed as to the precise range, but were required to find it for themselves. An 8 inch shell was accordingly fired into the air as a trial shot, and this, despite the novely of the target, sufficed to supply the gunners with the necessaay information. The next shot brought down the baloon. The projectile was a sharpnell shell, and the fuse had been so well timed that the shell burst just in front of the baloon, projecting something like 300 bullets through the fabric, and causing its immediated descent.

WOMAN GOSSIP.

Perennial.

She was but a little girl
When I first began to woo,
The completest little girl
Ever doting poet knew.

Still she seemed a little girl
When to maidenhood she grew,
And evermore a little girl
I evermore must woo.

Though her hair may turn to silver,
And her red cheeks lose their hue,
She yet will be the little girl
My love-charmed fancy drew.

And though death's decay should pierce
Her sweet body through and through,
She will remain a little girl
To my enraptured view.

Fashion Notes.

Shell pink is a fashionable color. The husband of the lady who wears the pink usually does the shelling.

It is the fashion to cover the shoulders, back and bosom, with hoods, fichus, and pelerines of various styles and dimensions.

Cashmere designs are more in vogue than any others in the new brocades and damasses, though both large and small flower patterns appear in them.

Large gilded hooks and eyes fasten bonnet strings under the chin, and are used largely also on cloaks and wraps of all kinds that require to be fastened.

Some of the handsomest skirts of the season are made of plush, entirely plain, save that a balayeuse plaiting of doubled satin appears below the edge.

Pointed waists are the leading styles for full dress, while round waists, plaited waists, and blouse designs continue to be employed for plain house dresses.

The new brocaded satins and velvets differ from those of last season's manufacture in presenting large detached figures rather than the small matelasse effects.

The morning-gown is generally made long. It is mostly composed of a deep jacket, loose in front, semi-fitting behind, called a matinee, and can be worn with any skirt.

Plush is the favorite material for open wraps. It is imported in three colors—pink and blue in medium shades, and white. Satin is also used for this purpose, with plush as trimming.

Large sleeves are the universal feature of new wraps. Dolmans are called visites, and for the fall months are of light goods, lined with satins of some rich color and trimmed elaborately.

The new shoe-buckles are beautifully chased and encrusted. One of the favorite designs is a star, and another is the pretty hook and eye, now so fashionable for dresses, in cut steal.

Fancy feathers which have been so much worn will be superseded this fall by ostrich tips and feathers on the most elegant hats and bonnets. Plush will be as much used as velvet.

Buckles are in fashion again, and are used in many forms. Large ones of cut jet are placed midway of the ends of a Turkish sash, and they are seen on hats, cloaks, and dress waists.

Among the novelties this season for evening dresses are satin-faced grenadines with raised designs. They come in every variety of design and tint. They are usually made up over satin or silk.

Very pretty indoor jackets are made in the casaquin style, moulding the waist, and coming down low over the hips. The front is trimmed from the neck down to the waist line with a lace quilling.

A new felt skirt for the winter is as soft as ladies' cloth, yet thick and warm. It is seamless, and measures two yards around. The material is Austrian wool, manufactured in England, and it is called the Princess Alice.

A dress that will be popular with young ladies this season in a combination of cloths of camel's hair with plain surah, such as plum-colored cloth with surah that has a plum ground and many gay bars of pale blue, red, and orange.

Wide collars are used universally upon girls' dresses this season, and sashes are seen everywhere. The latter are often embroidered in a loose and sketchy manner across the ends, and ribbons are also decorated with a little odd stitching.

The most costly bonnet made this autumn was fashioned for a wealthy lady in New York recently. It was a model of quiet taste, being of dark rich maroon plush, with diamonds set in the head of pins, which were fastened tastefully over it. The jewels made the bonnet cost $6,000.

The ends of all tabs and trimmings that depend from the waist or skirt are gathered and finished with a tassel or other ornament. The ends of ribbons and bonnet-strings are either gathered at the end or shirred a few inches above and the ends fringed, producing the same effect.

Combination undergarments of different kinds are destined to revolutionize the old and painstaking modes of making. The prevalence of close-fitting cuirass waists requires the nicest adjustment of all that is worn beneath them, and hence these garments are more than ever in demand.

Waifs.

Said he: "Let us be one." And she was won.

Multum in parvo. The little finger carries the biggest ring.

"Oh, dear! I wish I was dead!" exclaimed a neglected maiden. She had heard that matches are made in heaven.

HINT FOR MAMMAS.—An old lady who has several unmarried daughters feeds them on fish diet, because it is rich in phosphorus, and phosphorus is the essential thing in making matches.

"IF I have ever used any unkind words, Hannah," said Mr. Smiley to Mrs. Smiley, reflectively, "I take them all back." "Yes, I suppose you want to use them over again," was the not very soothing reply.

THE girls who were to be converted recently in St. John's Roman Catholic Church, Concord, were officially informed beforehand by the Bishop that he would not lay his hands on any head that bore banged or frizzed hair.

At a printers' festival, lately, the following toast was offered: "Woman! Second only to the press in the dissemination of news." The ladies are yet undecided whether to regard this as a compliment or otherwise.

PHONETIC.—Maiden aunt to tall young nephew: "As I stood by you in church, Percy, I could not help being struck by your size." Percy: "Very sorry, aunt, but there was such an awfully pretty girl the other side of the aisle, I couldn't help sighing."

"What! that coffee all gone?" "Yis, mam. There isn't a blessed drawin' left in box." "What! four pounds of coffee used up in our small family in one week?" "Small family? Musha, thin, mam, there's two of yez an' the maid, and ther's me an' me foive admirers, who has aich a night to hisself, and how ye can make a small family out of tin o' us is beyant me intirely. I don't know what ye'll do whin I come to fill in th' other two nights o' the week wid young men who wants a sup o' hot coffee for to keep the chills away!"

A NUMBER of French ladies recently had an amicable contest as to who could arrange the most distinguished toilette from the cheapest and commonest material. The prize was awarded, at a breakfast in the country, to a lady whose dress was of *toile d'emballage*, or packing cloth, lined with red, and trimmed with lace, and with wild flowers embroidered on a gold ground, parasol and shoes to match, and twelve button gloves. The embroidery cost eight hundred francs, the lace fifteen hundred, the handle of the parasol six hundred, but the material of the dress cost only seventy-five francs. Nothing is said of the dressmaker's bill.

They were sitting together in the horse car. "I do hate people who are forever talking about their neighbors," said the woman with the peaked hat. "So do I," coincided her companion in the cashmere shawl. "There's Mis' Green," continued Peaked Hat, "continually a carryin' things back and forth. Think she'd better look to home. Goodness knows she and her husband live a reg'lar cat-and-dog life." "Yes, indeed," said Cashmere; "and her daughter Sarah is'nt half cared for. I was tellin' Mis' Jones only yesterday that the way Mis' Green neglected that girl was a cryin' shame. Oh! by the way, did you hear that story about Tilda Smith?" "No! what is it?" exclaimed Peaked Hat, turning half round in her seat in her eagerness, her eyes sparkling in anticipation of the coming treat. But gentle reader, never mind what it was Neither you or I care anything about it. We hate tattling just as bad as Peaked Hat and Cashmere.

A North Carolina Marriage.

Soon after the close of the last war Captain X was appointed a justice of the peace in a country place not far from Raleigh, North Carolina.

His father had been a planter in a rather small way, and his son the captain had acquired considerable experience in the business of managing real estate, drawing up deeds, etc., during the father's lifetime, and then in settling the estate after his decease. Further than this he had no legal knowledge, and, indeed, his entire stock of "book-learning" was small and poorly selected, but any lack in general information was fully made up, for his uses, by self-assertion. Late one afternoon, as he was riding home from Raleigh, he met a young woman and two men, who hailed him and inquired if he was Captain X. The young woman and one of the men wished to be married at once. The other had come as a witness. They had procured the necessary license, but an irate father was on their path, and swore that they should never be married. It was considered on all accounts safest to have the ceremony performed without delay, and try pacification afterward.

Now the captain had never witnessed a marriage, and naturally had no very clear idea of what was usual in such cases. He remembered having seen a book about the house years before with a form for marriage in it, but what the book was and where it was he could not remember.

"Why," said he, when he told the story afterward, "I knew the 'Postles' Creed and Commandments, and at first I thought I'd use 'em to begin on, but then I reckoned, on the whole, they was too durned solemn."

He asked the couple to come to his house, secretly hoping that he could find that book; but they declined, for the reason that the matter admitted of no delay.

A less assured man would have been sorely perplexed, but not he. He lost no time in removing his hat, and remarked, "Hats off in the presence of the court." All being uncovered, he said, "I'll swear you in fust off. Hold up yer right hands."

"Me too?" asked the friend of the groom.

"Of course," said the captain, "all witness must be sworn. You and each of you solemnly swear that the evidence you shall give in this case shall be the truth, th' 'ole truth, an' nothin' but the truth, s'elf you God. You, John Marvin, do solemnly swear that to the best of your knowledge an' belief you take this yer woman ter have an' ter hold for yerself, yer heirs, exekyerters, administrators, and assigns, for your an' their use an' behoof forever?"

"I do," answered the groom.

"You, Alice Ewer, take this yer man for yer husband, ter hev an' ter hold forever; and you do further swear that you are lawfully seized in fee-simple, are free from all incumbrance, and hev good right to sell, bargain, and convey to the said grantee yerself, yer heirs, administrators, and assigns?"

"I do," said the bride, rather doubtfully.

"Well, John," said the captain, "that'll be about a dollar 'n' fifty cents."

"Are we married?" asked the other.

"Not by a durned sight ye aint," quoth the captain, with emphasis; "but *the fee comes in here.*" After some fumbling it was produced and handed to the "Court," who examined it to make sure that it was all right, and then pocketed it, and continued: "Know all men by these presents, that I, Captain X, of Raleigh, North Carolina, being in good health and of sound and disposin' mind, in consideration of a dollar 'n' fifty cents to me in hand paid, the receipt whereof is hereby acknowledged, do and by these presents have declared you man and wife during good behavior, and until otherwise ordered by the court."

The men put on their hats again, the young couple, after shaking their benefactor's hand, went on to meet their destiny and the irate father, while the captain rode home richer in experience.

THE present potentate of Turkey, Abdul Hamid, is described by the Constantinople correspondent of the London *Times* as a nervous, timid man, who is afraid of his own shadow, and who does not venture to ride or drive beyond the limits of his well-guarded private pleasure-grounds. Yet he defies Europe. Though physically a coward, he has something of that peculiar courage which produced the *coup d'etat* of 1851, and when his cowardice and obstinacy are at issue, the latter generally carries off the victory.

The Czar's Bride.

The Emperor Alexander had been in love with the princess Dolgorouki for more than twelve years. He first met her at the residence of her sister-in-law, the princess Dolgorouki-Vulcano, a most honorable Neapolitan. Struck with the grace of the princess Catharine, a blonde of charming simplicity and great beauty, the emperor declared his love, and the affair soon became the talk of St. Petersburg. He established her in apartments on the English quay, and here he has visited almost daily for the past ten years to seek solace in her society from the cares and worries of state affairs. The princess Dolgorouki has given birth to several children, all of them being authorized by imperial ukase to bear the titles of Count and Countess de Gourine, the name of the extinct branch of the Romanoffs. The princess followed the emperor to the banks of the Danube under the name of Mme. Bilejer during the late war with Turkey. Of course the empress knew all about it, but her malady and the coldness of her nature caused her to shut her eyes to the real state of the case. But when the czar desired to legitimatize the princess' children, the empress, the czarewitch, and the grand duke declined to accede. The Czarina determined to leave Russia and find at Cannes a refuge from the insult offered her. The czarewitch avoided the winter palace as much as possible. The influence of the Princess Dolgorouki grew daily stronger in the czar's household. The emperor yielded so completely to its fascinations, that he even showed anxiety to obtain a divorce from the empress and to marry the princess. Now that the marriage is accomplished, it is almost certainly of the kind known as "morganatic," in which the bride stipulates that she and her children will neither assume the rank nor inherit the possessions of the husband. These alliances are not over frequent, but the *Europe Diplomatique* occasionally furnishes us with a list of such marriages entered into by the princes of the royal house of Europe. Besides Victor Emmanuel, Leopold I., of Belgium, and Frederick VII., of Denmark, the latest list embraces some fifteen princes' names, a large majority of whom belong to the reigning house of Germany and Austria.

The Grotto Under Mount Rossi, Sicily.

The eruption of Mount Etna in 1669, says *La Nature*, was the most formidable of historic times. The side of the mountain opened for a length of about four miles, and there issued from it a torrent of lava four miles broad, which, after destroying several villages, and half of the city of Catane, flowed into the sea and formed a promontory two miles long by half a mile wide and sixty feet high. At the same time the scoria and sand thrown out by the craters formed a mountain with a double crest, that was at first called Monti della Rovina, and later Monti Rossi, on account of the reddish color that the scoria from the two crests assumed through the oxidation of the iron contained in it. The higher of the two crests is about 800 feet above Etna, and about 3,000 feet above the sea. In the interior of the cone of Mount Rossi there are two immense extinct craters, exhibiting the characteristic funnel-shape, and the sides of which are formed of scoria in a decomposing state. Up to 1823 no one had had the curiosity to descend to the bottom of these craters; but at this period the intelligent observer, Mario Gemellaro, undertook their exploration. He saw with some surprise a horizontal aperture at the bottom of one of the cavities, and entering it with a torch, he found, after traversing a suite of corridors resembling the galleries of a mine, a large well, into which he caused himself to be lowered by means of ropes. At some feet from the bottom of this well he found a vast rectangular room, at the further end of which there was a passage which grew smaller and smaller, and at last became impassable. This remarkable grotto, which was named Grotto della Palombe, is situated exactly in the centre of Monti Rossi It has now been open to travellers, the decent being facilitated by a stairway, and the cavern being illuminated by magnesium light instead of the former resinous torches.

LEWIS IRWIN displeased his parents, at Gallipolis, Ohio, and while his mother pounded him with a club, his father shot him with a pistol.

BREAD made from whole wheat soaked before been coarsely ground is used in the French army. Sea water used in the kneading is said to add flavour.

A Bride's Mausoleum.

A new church edifice, a princely gift, says *The New York Sun*, at Lebanon, Pa., was consecrated in this back-country borough today. There is quite a romantic story of love and sorrow connected with it. The new edifice cost a very large sum of money, and it is generally known that every dollar was paid by Mr. Robert Coleman, one of the leading members of the "house of Cornwall," founded upon three mountains of iron ore here in Lebanon county, about one hundred and forty miles west of New York. The church is the borough proper. Cornwall, a a few miles distant, is the home of the Colemans, the richest iron family in the state. Monday being the festival of St. Luke, was chosen for the consecration of the magnificont edifice, and it was dedicated with all the rites and ceremonies of the Episcopal church.

Several years ago Mr. Robert Coleman met a young lady of very prepossessing appearance in a tour he made of New England. She was the daughter of a respectable family of Connecticut in moderate circumstances. A mutual attachment followed, and not long after the couple were maried. A short time after the marriage the young bride was suddenly taken ill, and a trip on the continent was arranged by her husband. It was thought that the climate of the south of France, Italy, or Spain would be best for her. All that love and boundless wealth could give was furnished with a most liberal hand The husband was compelled to remain at home on business engagements. It was confidently believed that the bride would soon be restored to good health, and very soon after her departure the husband set about preparing a surprise for her. He supposed that she would be about a year, and he determined to erect one of the most costly residences she had ever seen and have it all finished and furnished in time for her arrival home. She was to know nothing about it until the carriage should drive her to the door from the railway station. Mr. Powell. a Philadelphia architect, was instructed to prepare the plans. The structure was to be in the Scottish baronial style, and Mr. Coleman cared very little about the cost. A fine sight was chosen, broad and level and elevated with a commanding view of a long stretch of the beautiful Lebanon valey.

The Coleman estate comprises about five thousand acres. In one part of it is a brown stable containing some thirty thoroughbred horses. The most valuable animals are quartered in rooms having mirrors on the walls and Brussels carpets on portions of the floor. Five monstrous furnaces are smelting ore night and day on the estate. Three hills contain an inexhaustable suply of ore. These furnaces have made millionaires of a dozen families or more. Robert Coleman is the youngest son of the iron kings of the present line of owners. Interested parties and heirs are scattered in many climes, but Mr. Coleman remains in complete charge of the vast estate. Every thing is conducted in princely style. Every employee lives on the place, rent free. The cottages are models of neatness, cleanliness, and convenience. A church, store, Sunday school, and other necessary wants are fully supplied. The great farm supplies employees with wheat, corn, potatoes, and vegetables at far below market price. Splendid family mansions occupy prominent places. Tally-ho coaches, drawn by four-in-hands, convey the members of the Coleman family and their many visitors to the neighboring towns and railway stations. Hence to the new mansion that was to be erected by Mr. Robert Coleman as a surprise to his bride. it can readily be imagined, was to be something exceedingly grand. The foundations were massive, and built of granite and limestone. The underground divisions were commodious and finished in the most modern style. a hard cement floor was laid. The frames of the large bay windows for the first floor weighed several tons apiece. The superstructure was to have been of marble, iron, and granite. The interior was to be finished in hard wood. The work was proceeding splendidly, and some fifty men were steadily employed. Car load after car load of material was arriving and being put in place. All efforts were made to rapidly push on the work of completion of the work. Every detail of furniture and upholstery had been decided upon. The gardener had received his special instructions. In fact, everything had been fully arranged looking to the rapid completion of the mansion when a tellegram came over the sea that the young bride was ill in Paris. Quickly followed another dispatch that she was dead. Every tool in the new house was dropped. The young husband, stricken with grief, was or a time not to be consoled. He ordered the workmen onthe new mansion to go to the office and draw their pay, and then to remove their tools and other property, In a few days orders were given to tear down what had been put up; to throw in the excavations, and plough the place over. All that remained of what was to be a palace was ordered to be obliterated.

The construction of a beautiful church dedictated here to-day concludes the story. The remains of the dead bride were embalmed and brought back to America, and were then placed in a vault until the construction of the church walls had been sufficiently advanced to receive them. The new edifice is cruciform, 96x75 feet. the floor is of Spanish tile from Valencia. The woodwork is of oiled oak. A massive tower twenty-four feet square rises one hundred feet in the air. The structure is of grey stone, even to the window sills. A hydraulic engine in the basement supplies air for the organ. The style ot finish is old English, with massive granite colums. The leading Episcopal clergymen of the eastern section of the state were present at the consecration, including M. A. De Wolf Howe, bishop of this diocese, who was the consecrator; the Rt, Rev. Dr. Hare, bishop of Niobrara, Indian Terrtory; the Rev. Dr. Oliver, of Nebraska; the Rt. Rev, B. Wister Morris, missionary bishop of Episcopal convention in session last week in New York. The Rev. Chandler Hare is the rector of the parish. The new church has a seating capacity of about five hundred. It was filled to overflowing to-day by the leading citizens of this section of the state.

Messages from the Sea.

A few instances of messages from the sea, reported from time to time to have been found, like Poe's manuscript, in a bottle, may perhaps be taken for what they are worth. A girl picked up in the sea near Barrow a securely corked bottle containing a scrap of old newspaper, on which was indistinctly written: "Gone down off the coast of Ireland, the Steamer Combat, with all hands. Capt. Yates." There was no mention of date on which the ship sank, but the writing appeared to have been hurriedly done. On the shore of the Bay of Luce a bottle was reported to have been found containing the following message, written in pencil on a piece of paper, the writing being much faded: "On the 29th of April, 1876, the ship Herclades was wrecked on the extremity of Patagonia. Crew in the hands of savages. Bring us assistance." During a fearful winter storm, it was conjectured, from the large quantity of wreckage floating about, that many vessels had been lost at the mouth of the Tay in addition to those reported at the time. Some particulars reached the press—whether verified or not the writer is unable to say—that a letter inclosed in a bottle was cast ashore on the Fifeshire coast giving a clue to one of these ships. The letter, blotted and otherwise damaged by sea-water, was written in bold Norwegian characters, and was thus translated: "Schooner Bay, Tonsberg, 25th December, eight morning. We are now in a sinking condition, within sight of the Bell Rock, outside the River Tay. We have had both boats smashed and carried away, and cannot therefore make an attempt to come ashore, We have experienced great hardships during the heavy gales in the North Sea. Greater part of rails, stanchions, and bulwarks are away. We have been laboring constantly at the pumps for three days, and the forecastle and cabin are full of water. Everything is destroyed, and we have but little to eat. We now put our trust in a merciful God, and if it is our fate to die, we hope to arrive at a heavenly throne. The crew is otherwise all well, and asked to be remembered to their dear ones at home—(Signed) H. Mathison, captain of the schooner Bay." The letter bore the address: "To Tonsburg, Norway." The name of the Bay was on the Norwegian shipping-lists, and she would have a crew of seven or eight hands, and is supposed to have been bound, coal-laden, from the Tyne to Norway. This sad message from the sea was reported to the owners. Considering what has resulted from mariners' experiments with bott'es afloat, and how often, after disasters at sea, these have been the means of communication between the living and dead, too much cannot be said in condemnation of thoughtless persons who perpetrate hoaxes of this description.—*Chamber's Journal.*

OLE BULL begged that Mozart's Requiem might be played while he was dying, and it was the last music that he heard,

American Incomes.

There is no table of the average duration of fortunes; but the statistics of business failures in the country since 1866 show that the average *yearly* failures ranged from 1 in 163 in the year 1871, to 1 in 75 in 1876. How many business men in a thousand fail, once or more, during their business lifetime, I cannot learn. The proportion used to be estimated, for New England, at 99 per cent. That is probably too high a figure for the business of to-day, conducted as it is upon much shorter credits than formerly. But the proportion of traders who fail is probably not lower than 75 per cent. of the whole number.

How many of our people live upon their invested means? In 1866 our income-tax returns showed 771,000 incomes of $500 per year and over, and six million incomes of less than $500. But these were not incomes from capital; they were mostly earnings or wages. Probably not one in a hundred of these smaller incomes, and not over 10 per cent. of the incomes over $500, represented the interest upon investments. In France, ten years later, the census returned no less than two millions of people, *rentiers*, who live entirely upon their invested means. In 1877 seven and a half millions of the people —one-fifth of the population—were enrolled as rentes-holders or savings-banks depositors; but it must be added that the savings-banks do not often fail in France, and that sooner or later they are apt to fail with us. Most of these deposits are small ones. But no less than two millions of the French can say with Petrarch, *Parva sed apta mihi* "It is little enough, but it will do for me."

Thus, in spite of the resources of the country, in spite of the almost universal search for wealth, and in spite of the fact that we have a great many rich men at any given time, we still do not have a large class of permanently rich men; we do not even have, like the French, a large class of persons who have a permanent though small competence. The rich American's wealth is extremely volatile; in nine cases out of ten it is "fairy gold. The old land-owners form the chief exception to the rule; especially in our large cities, where the increase of values has been great.

But if our class of permanently wealthy people is small, so also in our class of destitute people. We are fortunate in having few of the very rich or the very poor, in having no such immense and harmful inequality of fortunes as we see in modern England. Our ill fortune is this, that our class of moderate competences is also small, that so few of us, in spite of our opportunities and our labours, have seized the good of even a small assured competence. The land is full of people who have not, on the other hand, and who are not likely to have, any assured competence, however moderate, but who have nothing to expect but labour to the end. That is, indeed, the appointed human lot for the majority in any community; but need it be, in a country of resources like this, so nearly the universal lot? Might not many of us avoid it by a greater care for a moderate competence, a a lessened ambition for fortunes?

Big Harbour Scheme for Montreal.

(From the Montreal Witness.)

A gigantic scheme was presented to the Board of Trade recently by Mr. Shearer. It is stated that the Harbour Engineer sees no practical difficulty in carrying it out, while several of our most prominent and enterprising citizens have declared it to be feasible. Mr. Shearer's plan is to divert the current of the St. Lawrence opposite the city into the channel beneath St. Helen's Island and the southern shore by having various obstructions removed and running a dam, or "peninsula," as he calls it, from Point St. Charles to St. Helen's Island, thus stopping the current from running through the present main channel between the city and St. Helen's Island. Mr. Shearer claims, in the first place, that the dam will prevent the shoving of ice opposite the city and the consequent flooding of buildings in the Griffintown district, and will make of this a still-water harbour where vessels may lie during the Winter. It is estimated that the construction of the dam would raise the water two feet in the river and lower it two feet in the harbor. This would give a head of four feet for mills, elevators and factories, and the transportation of freight. Last, but not least, the dam would afford a roadway across the river upon the construction of a bridge from St. Helen's Island to St. Lambert, thus removing the necessity for a tunnel. This would form not only a highway, but a road for carriages and foot passengers. No estimate of the cost of construction has yet been made, although Mr. Shearer says this scheme will cost no more than a tunnel.

The Coming Revision of the Bible.

It needs to be modified by sound reason. Were the English Bible chiefly a work of art, or a monument of the English olden time, the æsthetic feeling should rightly dominate and a jealous conservatism should watch against modern innovations, by the hand of whatever scholar they might be wrought. We do not deny the literary skill of King James's translators. Their work is artistic in the highest sense. They were men of broad and cultivated minds, and they gave the English people a model of literary beauty and sublimity in their translation (or revision) which compares most favourably with the versions of all other tongues. We may add that in this artistic character of their work they themselves borrowed the phrases and words of Tyndale, which had already become antiquated, and so gave the majesty of hoariness to the other virtues of their style. In looking at their work, therefore, we are beholding a phase of the English language really older than their own time. But we must bear in mind that beauty and antiquity of style are not the paramount considerations in the question of Bible translation. The truth—the truth is what we desire. All other objects sink into insignificance in comparison with this. We seek a perfect translation of the Hebrew and Greek. The idea is of first importance, and the clothing of the idea is secondary. A perfect translation is indeed impossible. A grand sentence must loose something in passing into another language. If it keep its main thought, it must loose its grandeur, it must work some change in the thought. We must, therefore, give up the idea of reaching a perfect translation, although we make it our goal. Which, then, shall we throw out of our car as we advance—the sense or the style? Undoubtedly the latter The only fatal embarrassment in this is at those crisis where the very style enters into the sense, and you cannot tear them apart without destroying both. In such cases we must bow to the necessity and give a bad translation, leaving it to the scholar to explain the difficulty and the real meaning in whatever circumlocutory way he may. Generally speaking, then, we must sacrifice style to sense, and, in doing this at the present time, we may subject ourselves to the charge of iconoclasm. If a rich, round sentence that we have loved to mouth is trimmed to angularity in order to express the truth, the crowd of critics will be apt to overlook the constraining necessity and bestow on us a consentaneous groan. Let us give an illustration. In Acts, xxvi.: 24, the words of Festus to Paul are musical and terse: "Paul, thou art beside thyself; much learning doth make thee mad." It is a strong English sentence; each clause is well balanced. You may compare them to two equal shafts striking the centre. As you read them you are Festus, and you speak with conscious force. Now, shall we dare alter such a rare specimen of telling English? All the beautiful in us rises up in indignation at the thought. And yet we must humble ourselves and our pride of taste for the relentless cause of truth. What is the Greek here? What did Festus really say? * * * The truth is, Festus did not say half as fine a thing as our English sentence, Moreover, he did not mean what our English sentence means, Festus first, in the impetuosity of his feelings, told Paul he was mad; then, correcting himself, with true Roman politeness, he modifies his expression, and says that Paul's learning was gradually bringing him to a condition of madness. The English of what he said is: "Thou art mad, Paul; much learning is turning thee to madness." Our received version makes the two clauses of equal strength, the latter clause merely adding the cause of madness. Moreover, the received version does not recognize the similarity and relation of *maine* and *mania*. If we translate as above we lose a remarkably strong sentence, beautiful in its strength; but, if we leave the beauty and strength undisturbed, we do not have what Festus really said. Now, ye critics, take this instance as a sample, and tell us what we are to do. Are we to cling to principle faithfully, or shall we hold on to principle only until we see a pretty face? What will you have, that which the sacred writers say, or that which King James's translator's say?—The REV. DR. HOWARD CROSBY, in *North American Review.*

THE CANADA LUMBERMAN

AND MILLERS', MANUFACTURERS', AND MINERS' GAZETTE.

ISSUED SEMI-MONTHLY AT TORONTO, ONT.

A. BEGG, - Proprietor and Editor.

TERMS IN ADVANCE (Post-paid):

One Copy one year..... $2 00
One Copy six months..... 1 00

ADVERTISING RATES

$1 50 per line per year; 85 cts. per line for six months; 50 cts. per line for three months.

Small Advertisements 10 cts. per line first insertion 5 cts. per line each subsequent insertion.

Business Cards, Forms of Agreement, Bill Heads, &c,. promptly supplied to order, at the LUMBERMAN Office.

Communications, orders and remittances, should be addressed to A. BEGG, LUMBERMAN Office, 33 Adelaide Street West, Toronto.

TORONTO, ONT., NOVEMBER 15, 1880.

BARYTES OR SULPHATE OF BARYTA.

This mineral is of considerable economic value, being used for many purposes, but principally for mixing with white lead and for enamelling. It is scarce in the whole of North America, and consequently very large quantities are annually imported into the United States from England and Germany, but chiefly from the latter country. We understand that there are but two places in the United States where the raw ore is pulverized and prepared for use—the one, New Haven, Conn., and the other St. Louis, Mo. At the former there is, or rather there *was*, a mine—for we believe it is nigh exhausted—owned and worked by Mr. Sandford, President of the Stamford Manufacturing Co., New York, and who, it is said, has amassed great wealth from his ownership of this mine, although the article which he produces is by no means of first-rate quality. At St. Louis, we understand there is no actual deposit or mine, but the mineral is found in boulders, and the farmers, on whose farms it turns up bring it to the mill, and are well paid for it, as it is of a very fine quality, and when manufactured, brings the highest prices. In Nova Scotia considerable Byrata is found, but owing to its colours, it can be used only for mixing with coloured paints, and consequently is not in much demand. In the Ottawa Valley, however, nine miles from the city, and within three or four miles of the steamboat landing on the Gatinean, it is said the largest and purest deposit of Baryta, yet discovered on this continent is to be found. Its location is in the township of Hull and is referred to in an official report of Sir Wm. Logan, made to the Government some years ago. From enquiries made, we learn that some 250 tons of ore from this mine have already been manufactured into white paint, equal to any lead, by the late Alex. Ramsay, of Montreal, and that he obtained first prize for it at the Centennial Exhibition at Philadelphia. It appears that, by means of a recent discovery in Scotland, patented there by the discoverer, and patented in Canada and the United States by Mr. Ramsay, Baryta is turned into excellent white paint, without a mixture of any *lead* whatever. We are informed that all the Admiralty ships are now painted with this material, and that it was for this mixture that Mr. Ramsay got the chief prize at Philadelphia. If this be so, and we do not doubt it, Byrata is destined to become an article of much usefulness and value, as, if found in the Ottawa Valley in sufficient quantity, it can be cheaply mined and manufactured, and the great expense of lead will be saved to the consumer. For this simple grinding of the article, we are told that Mr. Bonnyn, Hospital street, Montreal, has mills capable of grinding two tons an hour, and it might be well for such as have any of the "raw material" to communicate with that gentleman. It would be well, also, for such as may find traces of this mineral in their lands, to look closely after it; for though valuable enough *now*, to pay well for mining, there can be no doubt that in a short time it must become of much greater importance and value. Sulphate of Baryta is usually found in thin veins, from half an inch to two inches in width at the surface, and widening as it goes down; though to this rule there are exceptions, as in the case of the Hull mine, to which we have referred, a surface width of two to three feet is shown, widening rapidly as it descends. It is also found in pockets, and it is from such, that the Novia Scotia Barytes is taken, consequently the quantity is more uncertain and smaller, than when found in regular and well defined veins. It is invariably found with galena, but not in quantity to pay for working. The demand for Baryta is at present limited to about 1,200 to 1,400 tons per annum in Canada, but over the border, the demand is nearly unlimited, although the import duty almost prohibitory, viz:—half a cent a pound or ten dollars a ton. This is what has enabled the mine owners and grinders of it in the United States to make such large profits. The price in Boston and New York varies according to quality, some going as high as $50 a ton—but if Canada can produce an article of the highest grade, of which there is not the slightest doubt, it is evident, we can, even with the enormous duty exacted, still successfully compete with the English and German importers. We earnestly hope some of our enterprising capitalists will take this Baryta matter in hand; for besides the great general advantage of developing the latent and unproductive mineral wealth of the country, we are satisfied "there's millions in it" to those who are willing to invest a moderate amount of money, with a speedy return. We propose returning to this subject—meanwhile we will be glad to hear from any of our correspondents regarding Baryta.

MUSKOKA IMPROVEMENT COMPANY

A company has recently been organized amongst the lumbermen of Muskoka and Georgian Bay, for the purpose of regulating the driving and sorting of saw logs, constructing slides, booms, piers, dams, &c., on the Muskoka Rivers, the Severn, Musquash, &c. At a meeting which was held at Gravenhurst, the company was formed, and $50,000 capital subscribed. Messrs. H. H. Cook, Richard Power, A. P. Cockburn, M.P.; G. W. Taylor and Hon. Alexander Mackenzie were elected directors. The directors at a subsequent meeting, after electing Hon. Alex, Mackenzie president, prepared estimates of the proposed works and made arrangements for immediately commencing work upon the most urgent of these. A similar company, namely, "the Upper Ottawa, Improvement Co," has been in existence for some years, with a capital of $150,000. The directors are Messrs. Bronson, Perley, Eddy, Gordon and H. Robinson, H. Robinson, president, J. R. Booth, secretary, G. B. Green, acting secretary. The operations of this company extend from the Des Joachim to the foot of Hull Slide The organization has been found of great service to all parties engaged in lumbering on the Ottawa. The Muskoka Company will doubtless prove equally serviceable.

THE sale of "gold" bricks, made principally of brass, is brisk in the West. One corner is pure gold, and from it is clipped the sample to be essayed.

COAL OIL FIRE TEST,

The testing of coal oil has hitherto been a source of great annoyance to producers and consumers, owing to the uncertain results of the instruments used for making the tests. A very simple and complete instrument has just been perfected by Mr. M. Battle, Collector of Inland Revenue, Ottawa, which defines the flash test in a uniform manner on the automatic principle. Mr. Battle has paid great attention to the matter of testing oil, indeed the greater number of samples sent to the Department at Ottawa were submitted for his test and report. Yet he was frequently at a loss to obtain a uniform result, although he had the best instruments manufactured in the United States, Great Britain or the continent of Europe. His Improved Automatic Pyrometer however, combines uniformity of action, correctness of results, and simplicity of using. Nothing is required to be done by the testing officer or merchant, but to place a small quantity of oil in a cup, light a small lamp and watch two thermometers—one immersed in water, in a chamber underneath the oil and the other in the sample of oil to be tested. As the mercury rises to the testing point a double valve is opened by the party in charge, and if no gas or vapour is generated the light will continue to burn, and the oil is safe; but will be extinguished as soon as gas is evolved up to the number of degrees indicated, making the oil dangerous at that temperature. It is likely that that Mr. Battle's Pyrometer will be made the standard for the Dominion, and if so, it should supersede all others now in use, whether operated by electricity or otherwise.

THANKSGIVING.

It was our lot to be in the City of Belleville on Wednesday the 3rd inst., and considering that lumbermen and their representative connected with this journal had much to be thankful for, in common with the rest of the community, we went to hear the Rev. Mr. McLean, (Presbyterian) on that occasion. The rev. gentleman founded his remarks on Psalm 103, verse 2, "Bless the Lord, O my soul, and forget not all his benefits."

After referring to our deep obligations and many privileges, he said: It was cheering to think that the day had been set apart by the Government of our land for the observance of this sacred duty of thanks to God for his goodness to us as individuals and as a nation—cheering to think that our fellow subjects gather together to-day to acknowledge our common Father by the united recognition of his greatness and goodness throughout the land. The future of a land that thus recognizes its duty and privileges cannot be other than a great one.

It might be asked what are the reasons for thankfulness on our part. Are not the times dull? Do not many to-day feel that with the will to work, the opportunity is not afforded? Is it not a fact that our city is in a worse condition commercially, than it was in days gone by? While there is apparent ground for the spirit that is manifest in these questions, there may be, after all, reason for thankfulness in the very things complained of. Allow that our city has been in a bad condition in a business point of view for some time back; whose is the fault? To the best of my belief it lies at our own door. We have been going on too fast in one way and too slow in another. We have been overcrowding our different branches of commerce. For example, there have been too many young men, who, under the delusion that they were heaven-born merchants—have forsaken the sure, if slow, returns of farming life, for the swift but uncertain gains of merchandise. The result has been, as might be anticipated—many of these have come to ruin, and have been taught by a bitter experience, that it really does need, at least, a modicum of training to succeed in any business or profession, in those days.

Again, merchants have been speculating too strongly on the likelihood of large sales, and, disappointed in their expectations, have been unable to meet their liabilities. Retrenchment has become the order of the day, of necessity. If these opinions are correct, then one great cause of present depression has been in overdoing things, and one result of the reaction will probably be a healthier commercial life in the future.

The same remarks as to extravagance may apply to general living in the past of the people themselves. The love of display among all classes of the community, has doubtless had much to do in lessening ability to meet engagements. The only cure for such a course is to live within one's income. Here again is one benefit that may accrue from the general stagnation that is complained of.

We certainly have to thank God for all the benefits He has conferred upon us. The common blessings of the earth such as air, sunshine, water, and harvests; each is needful for our well-being, and each given in all fulness. The preservation of our bodies, in all their senses, organs and faculties, so as not merely to enjoy life, but also to be serviceable—health and strength to do work and provide for families. All these are bestowed on us.

Living in a land of freedom, with wise laws honorably upheld, with property and life properly protected; with fair prospects for all who are willing to work; with a law-abiding, moral-living community, where lawlessness and crime are swiftly punished, and justice meted out to all—surely one ought to thank God for those benefits in these regards. Our harvest is plentiful, God has blessed the labours of the husbandman. No heavy floods "have disappointed his hopes, and sent dismay through the land." No bitter frosts have killed the ripening grain. For one grain sown, many are given back. He on whom we are dependent for rain and sunshine and fruitful seasons has again opened his hand and filled our barns with plenty.

And do we not see indications throughout the land of the return of cheerier times in the apparent growing briskness of business—of times when he who desires it may have work at home in plenty. Is it not a matter of thankfulness that in this Dominion of ours there is room and scope for all. That whosoever is able and willing to labour may find in it the place and the opportunity.

The Rev. gentleman concluded his excellent discourse with many practical and suitable lessons, bearing on "the life that now is, and the life that is to come."

A New Brunswick journalist displays a thankful spirit as follows:—It is very gratifying to know that there has been a vast increase of Inter-Colonial trade, as evidenced by the remarkable increase of traffic on the Government railways this year. Our exports, too, have been in great demand—our lumber (both in the United States and Britain), our grains, our cattle, the produce of the dairy and the orchard. We have to be thankful, too, for the remarkably favourable weather which has distinguished the season of 1880, weather so favourable for the full pursuit of the occupations of the industrial classes that we can scarcely hope to see it duplicated in 1881. We should also give thanks for freedom from epidemics and pestilences and tidal waves of crime and violence. We have to be thankful for the steady progress of education and temperance, the increa z [illegible] of the people in support of churches and Sunday schools. Among other causes for thankfulness may be cited the fact that Canada is regaining its old prosperity under the political leadership of the first Canadian of his generation, Sir John A. Macdonald; that the negotiations for reducing the public burthens by turning the building of the Pacific Railway over to a private company have been successful; and that the people of Canada have almost universally accepted the National Policy as the Tariff policy of the country. In our immediate neighbourhood there is cause for thankfulness in the increased trade which has sprung up; the hopeful spirit which has succeeded the feeling of despair which had taken possession of too many of our citizens; and in the evidences of "the good time coming" which are apparent to many amongst us. We may indeed be thankful with our lot when contrasted with the circumstances of the people of most other countries; and while grateful to an all wise Providence for the many blessings vouchsafed to us, let us resolve to do the very best for ourselves that lies within our power.

LETTER FROM QUEBEC.

THE END OF THE SEASON—LOADING THE LAST SHIP — LARGE TRANSACTIONS — PRICES, ETC.—THE PRINCIPAL OPERATORS IN OAK —LOGS — COMPARATIVE STATEMENT — MINING NOTES.

QUEBEC, Nov. 8th.

Before my next letter is addressed to the LUMBERMAN, it is probable that this port will be completely closed for the season to navigation. Ten days hence, and sea-going ships remaining here, will find it hard enough to reach the ocean. There are seven or eight timber vessels loading here, but all hope to be away within a week from this date.

It must be gratifying to producers and their friends to know that so small a stock of lumber will be locked up here for the winter. On a carefully prepared calculation, I find that there is now next to nothing held here in first hands.

During the present season, some twelve to fifteen cargoes of deals have been purchased and shipped home by Messrs. Bryant, Powis & Bryant, of London. Mr. H. W. Powis, a member of this firm, and a gentleman well known in Quebec, has spent the greater portion of the summer on this side the Atlantic, making purchases and shipping home his stock.

Very little business was done in Lower Town last week, the time being cut up by a couple of holidays.

WHITE PINE.

With the exception of small lots sold for local consumption, at 14 and 17 cents, no white pine has changed hands since my last letter. A small raft or two now remaining are held firmly at high prices. There is a good deal of inquiry for Waney Board, but no lots are at present offering.

DEALS.

There is but little change since my last letter to report, either in pine or spruce deals. Prices remain about the same with a tendency to a slight increase, owing to unsupplied demands.

OAK.

In previous letters, details have been given of several contracts for oak made this autumn for future delivery. Quantities and prices have been furnished. The contracting producers are principally Calvin & Co., Kingston, Neilon & Co., D. B. Charleson, Sarnia, D. C. Thompson, Quebec, and Mr. McCrea.

PRICES.

Oak, Ohio, 65 feet average as been sold as under within the last fortnight: By Calvin & Co., 50,000 feet at 50 cents; by Neilon & Co., 100,000 feet at 47 cents.

A raft of the same quality and average as the above, now in Montreal and to arrive, containing 30,000 feet, together with 15,000 to winter at Garden Island, have been sold by Calvin & Co. at 52 cents. This is believed to be the highest figure obtained. Of 63 feet average, 50,000 feet have been sold at 49 cents.

Michigan oak, 65 feet average. One lot has been sold by Mr. D. C. Thompson at 49 cents.

Canada oak remains unchanged.

Ohio and Michigan are still sought for next year's delivery.

Staves are scarce and in demand.

Elm and ash are in demand, particularly the latter.

In birch there is little doing, and the quantity on hand is not much reduced by late shipments.

FOR THE SHANTIES.

More shantymen have been dispatched to the woods since the date of my last letter. Nearly forty leave for the West by G.T.R.R. this evening, mostly for Toledo. Men are now very scarce here, and wages have again been reduced. It is not probable that more than one other batch will be made up in Quebec this fall.

COMPARATIVE STATEMENT.

In reviewing the business of the year and comparing it with that done in 1878-79, the following comparative statement of timber, masts, bowsprits, spars, staves, &c., measured and culled to date, by cullers attached to the supervisor's office, should prove of interest to readers of the LUMBERMAN:—

	1878	1879	1880
Waney White Pine	1,846,640	1,599,273	2,193,367
White Pine	7,917.756	2.507,729	4,216,263
Red Pine	1,359,756	741,499	7,020,364
Oak	1,516,223	835,993	1,567,644
Elm	177,653	336,461	932,950
Ash	36,597	47,161	238.461
Basswood	923	280	363
Butternut	39	70	645
Tamarac	29,306	6,691	30,889
Birch and Maple	180,416	121,224	575,464
Masts and Bowsprits	93 pcs	50 pcs	4 pcs
Spars	42 pcs	26 pcs	23 pcs
Std. Staves	299.3.1.8	178.5.3.7	195.7.1.1
W. I. Staves	564.1.3.9	169.2.2.26	487.7.0.8
Brl: Staves	.....	.....	10.8.2.10

WM. QUINN,
Supervisor.

Quebec, 5th Nov., 1880.

LOGS.

Messrs. King Bros. have given the contract for the cutting of 4,000 logs during the winter at St. Jean Deschaillons in this Province. Forty men with ten teams of horses, have also left for Pabos, Bail des Chaleurs, to cut 70,000 logs for the Messrs. King. Messrs. G. B. Hall & Co. lost a large quantity of logs a few days ago, by the breaking of their booms at the Chaudiere.

MINING NOTES.

It has been frequently asserted, and almost as frequently denied, that there are distinct indications to be seen of the existence of beds of coal in various parts of this Province. This week I have been shown a specimen from Lake St. John of what certainly looks very much like soft coal. Specimens of the article known in England as Cannel coal, or of something very akin to it, have frequently been brought to this city from parts of Montenaquy. I wonder that the Dominion Geological Survey has not ere this undertaken to prove the character of the supposed mineral,

From all that can be gathered, unusual activity will be the order of the day next Spring in the coal regions of Beauce. Heretofore miners have been content with the alluvial workings, and the large yields of the precious metal already reported from the Chaudiere Valley, have all been obtained by the washing of the sand. Preparations are now being made for the erection of mills to crush the quartz, and quantities of the most expensive and improved machinery applicable for the purpose are now being shipped to the diggings by Levis & Kennebec R. R.

STADACONA.

Special Telegram per Montreal Line:—

QUEBEC, Nov. 10.

Since mailing letter, it is reported E. H. Richer, St. Hyacinthe, has been authorized by French manufacturers to purchase for shipment as much white birch (Bonleau) as possible. No particulars as to size or for what required. Bonleau is very common in the province and much used for firewood.

Messrs. Allan, Gilmour & Co. of this city have sold the bright pine deals to be sawn at their mills next season. Prices were $112 to $115—$76 and $40 free on board for first, second, and third qualities.

The Eureka Consolidated mine yielded last year, according to the official returns, $2 358,518 in refined bullion and lead, $380,000 was paid in dividends during the year, and the amount of cash on hand, October 9th 1880, was $24,521.

Hardwood Timber Land for Sale.

FOR SALE, 1200 ACRES HARDWOOD timber land near Nipissing Railway, Coboconk. Easy terms: OSHAWA CABINET CO., Oshawa.

Timber Limits for Sale.

SEVERAL MOST VALUABLE TIMBER limits on North Shore of Lake Huron. For particulars apply to

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Imperial Bank Building, Toronto.

FOR SALE, AT A GREAT BARgain, 320 acres of excellent farming land, heavily timbered, and well watered by a branch of the Pigeon River, in Cheboygan Co. Michigan. Apply to the Editor of the CANADA LUMBERMAN. 1-tf.

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STEARN'S No. 3 SAW MILL Log Turner, 68 h.p. Engine, 3 Boilers, dome and heater. This is first class mill outfit, held for a bank and will be so'd cheap. We have also 2 Iron Lathes and other Machinery. Send for Price List.

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MANUFACTURERS OF

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ENGINEERS' & PLUMBERS' BRASS GOODS, &c.

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Steam Gauges correctly tested and repaired. 2-5in

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THOMAS GRAHAM,

File Works, 35 Sherbourne Street, Toronto, Ont.

Old Files reground and re-cut equal to new for use. During the past year I have re-cut nearly 3,000 dozen of old files for mill owners and others in Ontario and Quebec. Prices—per dozen for Mill Files, 8 in. $1.50; 10 in. $2; 12 in. $2 75; 14 in. 3.75. Other kinds *pro rata*. Quotations from these rates to large consumers.

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Intercolonial Coal Mining Co.,

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DRUMMOND COLLIERY.

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Apply to

Intercolonial Coal Mining Co.,
26 St. Francois Xavier Street,
MONTREAL.

The coal is now being received at Toronto by several of the dealers—W. J. Keith, C. J. Smith and others.

Notice to Contractors.

SEALED TENDERS, ADDRESSED TO the undersigned, and endorsed "Tender for Owen Sound Works," will be received until Friday, the 19th November, for the execution of Works for the improvement of the Harbour of Owen Sound, according to a plan and specification to be seen on application at the office of the River and Harbour Commissioners, Owen Sound, and at the Public Works Department, Ottawa, where Forms of Tender can be obtained.

Persons tendering are notified that tenders will not be considered unless made on the printed forms supplied and signed with their actual signatures.

Each tender must be accompanied by an *accepted* bank cheque, *equal to five per cent*, of the amount of the tender, which will be forfeited if the party declines to enter into a contract when called on to do so, or if he fails to complete the work contracted for. If the tender is not accepted, the cheque will be returned.

The Department does not bind itself to accept the lowest or any tender.

By order,

S. CHAPLEAU,
Secretary.

Department of Public Works,
Ottawa, Oct. 28th, 1880.

JOHN McGREGOR & SONS,

MANUFACTURERS OF ALL KINDS OF

STATIONARY,
MARINE, and
LOCOMOTIVE BOILERS,
and SHEET IRON WORK.

Portable Boilers for Threshing Machines, Shingle Mills, etc,, furnished on short notice. All Boilers tested by cold water pressure to 150 lbs. to the square inch before leaving the shop.

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Travellers by Northern Railway have 15 to 20 minutes by all trains, for refreshments. Solid meals Tea and coffee at counter. Fine brands of liquors and choice cigars.

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GRAVENHURST, ONT.

HENRY FRASER, proprietor (successor to Dougland Brown.) Mr. Fraser having purchased and thoroughly renovated and refitted that old established hotel, so long and popularly kept and owned by Dougald Brown, in the village of Gravenhurst, is now in a position to attend to the wants of the travelling and general public. Parties *en route* to the Muskoka District, will find "Fraser's" a comfortable stopping place. The Bar and Larder are well furnished. Convenient Sample Rooms for Commercial Men. Good Stabling and attentive hostler. Free 'bus to and from trains and steamboats.

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This hotel, which is unrivalled for size, style and locality in Quebec, is open throughout the year for pleasure and business travel.

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OTTAWA,

JAS. A. GOUIN, - - Proprietor.

IS THE

Favourite Resort of the Leading Public men of the Dominion attending the annual Sessions of Parliament.

Ministers of the Crown, Senators, Members of Parliament, Public Officials, as well as those having business with the various Departments of the Government. It is also the head-quarters of those having dealings with the princely Lumber Manufacturers in the great Pine Valley, of which Ottawa is the acknowledged centre.

THE RUSSELL HOUSE being central, almost abutting on the magnificent PARLIAMENT and DEPARTMENTAL BUILDINGS—the pride of the Country—is thus conveniently situated for those visiting the City on public business. But the location is also everything that could be desired alike for the man of business and the man of pleasure. A few minutes walk brings the guest of the Hotel within reach, not only of all the principal business resorts, but also of the most splendid Mountain and Valley Scenery that can be seen anywhere, as also of the two almost unrivalled Waterfalls—the Chaudiere and Rideau—and of the extensive Manufacturing Establishments and Depots of the leading Lumbermen. But, besides the beautiful scenery, which, it may be mentioned, includes the magnificent Ottawa and two of its grand tributaries—the Rideau and the Gatineau—there are in the immediate neighborhood, beautiful Lakes and apparently never-ending woods, which afford opportunities for the finest Fishing and Shooting that can be obtained on the Continent.

THE RUSSELL HOUSE affords excellent accomodation for 300 guests; its table is abundantly supplied with Viands of the choicest description, in season, and nothing is left undone to make every visitor feel comfortably "at home."

☞ Omnibusses meet the Arrival of every Train and Boat.

A Pointed Reminder.

A party of adventurous lads, myself among the number, were out for a glorious holiday. Each had his canvas bag across his shoulder, and we stole along the stone wall yonder, and entered the woods beneath that group of chestnuts. Two of us acted as outposts on picket guard, and another, young Teddy Shoopegg by name, the best climber in the village, did the shaking. There were five busy pairs of hands beneath these trees, I can tell you, for each one of us fully realized the necessity of making the most of his time, not knowing how soon the warning cry from our outposts might put us all to headlong flight, for the alarm, "Turner's coming!" was enough to lift the hair of any boy in town.

But luck seemed to favour us on that day. We "cleaned out" six big chestnut-trees, and then turned our attention to the hickories. There was a splendid tall shagbark close by, with branches fairly loaded with the white nuts in their open shucks. They were all ready to drop, and when the shaking once commenced, the nuts came down like a shower of hail, bounding from the rocks, rattling among the dry leaves, and keeping up a clatter all around. We scrambled on all fours, and gathered them by quarts and quarts. There was no need of poking over the leaves for them, the ground was covered with their bleached shells, all in plain sight. While busily engaged, we noticed an ominous lull among the branches overhead.

"'Sst! 'sst!" whispered Shoopegg up above; "I see old Turner on his white horse daown the road yender."

"Coming this way?" also in a whisper, from below.

"I dunno yit, but I jest guess you'd better be gittin' reddy to leg it, fer he's hitchin' his old nag't the side o' the road. *Yis*, sir, I bleeve he's a-cummin'. Shoopegg, you'd better be gittin' aout o' this," and he commenced to drop hap-hazard from his lofty perch. In a moment, however, he seemed to change his mind, and paused, once more upon the watch. "Say, fellers," he again broke in, as we were preparing for a retreat, "he's gone off to'rd the cedars; he ain't cummin' this way at *all*." So he again ascended into the tree-top, and finished his shaking in peace, and we our picking also. There was still another tree, with elegant large nuts, that we had all concluded to "finish up on." It would not do to leave it. They were the largest and thinnest-shelled nuts in town, and there were over a bushel in sight on the branch tips. Shoopegg was up among them in two minutes, and they were showered down in torrents as before. And what splendid, perfect nuts they were! We bagged them with eager hands, picked the ground all clean, and with jolly chuckles at our luck were just about thinking of starting for home with our well-rounded sacks when a change came o'er the spirit of our dreams. There was a suspicious noise in the shrubbery near by, and in a moment more we heard our doom.

"Jest yeu look *eeah*, yeu boys," exclaimed a high-pitched voice from the neighbouring shrubbery, accompanied by the form of Deacon Turner, approaching at a brisk pace, hardly thirty feet away. "Don't yeu think yeu've got jest abaout *enuff* o' them nuts?"

Of course a wild panic ensued, in which we made for the bags and dear life, but Turner was prepared and ready for the emergency, and raising a huge old shot-gun, he leveled it, and yelled, "Don't any on ye stir ner move, or by Christopher I'll blow the heads clean off'n the hull pile on ye. I'd shoot ye quicker'n lightnin'."

And we believed him, for his aim was true, and his whole expression was not that of a man who was trifling. I never shall forget the uncomfortable sensation that I experienced as I looked into the muzzle of that double-barrelled shot-gun, and saw both hammers fully raised too, And I can see now the squint and the glaring eye that glanced along those barrels. There was a wonderful persuasive power lurking in those horizontal tubes; so I hastened to inform the deacon that we were "not going to run"

"Wa'al," he drawled, "it looked a leetle thet *way*, I thort, a spell *ago*;" and he still kept us in the field of his weapon, till at length I exclaimed, in desperation.

"Point that gun in some other way, will you?"

"Wa'al, *no!* I'm not fer pintin' it enny whar else jest *yit*—not until you've sot them ar *bags* daown agin, jist whar ye *got* 'em, every *one* on ye." The bags were speedily replaced, and he slowly lowered his gun.

"Wa'al, naow," he continued, as he came up in our midst, "this is putty bizniss, *ain't* it? Bin havin' a putty lively sort o' time teu, I sh'd jedge from the looks o' these 'ere *bags*. One—two—*six* on 'em; an I vaow they must be nigh on teu two an' a half bushel in every pleggy *one* on 'em. Wa'al, naow"—with his peculiar drawl—"look eeah: you're a putty ondustrious lot o' *thieves*, I'm *blest* if ye ain't." But the deacon did all the talking, for his manœuvres were such as to render us speechless. "Putty likely place teu cum a-nuttin', ain't it?" Pause. "Putty nice mess o' shellbarks ye got thar, I tell ye. Quite a sight o' *chestnuts in yourn*, ain't they?"

There was only one spoken side to this dialogue, but the pauses were eloquent on both sides, and we boys kept up a deal of tall thinking as we watched the deacon alternate his glib remarks by the gradual removal of the bags to the foot of a neighbouring tree: This done, he seated himself upon a rock beside them.

"*Thar*," he exclaimed, removing his tall hat and wiping his white-fringed forehead with a red bandana handkerchief. "I'm much *obleeged*. I've been a-watchin' on ye gittin' these 'ere nuts the hull arternoon. I thort ez haow yeu might like to know it." And then, as though a happy thought had struck him, what should he do but deliberately spit on his hands and grasp his gun. "Look *eeah*"—a pause, in which he cocked both barrels—"yeu boys wuz paowerful anxyis teu git *away* from eeah a spell ago. Naow yeu kin *git* ez lively ez yeu please. I hain't got nothin' more fer ye teu deu today." And bang! went one of the gun-barrels directly over our heads.

We *got*, and when once out of gun range we paid the deacon a wealth of those rare compliments for both eye and ear that always swell the boy's vocabulary.—From "An Autumn Pastoral," by WILLIAM H. GIBSON, in *Harper's Magazine for November*.

Midnight Oil.

To the student, night reading is the most congenial, the most satisfying—and, we are bound to add, the most injurious. By tradition, your true bookworm burrows deepest at night. Perhaps the essayist was right when he exclaimed, "There is absolutely no such thing as reading but by a candle." Had he tried the perusal of a book at noon-day, and found it labour thrown away?

"Whence is thy learning? Hath thy toil
O'er books consumed the midnight oil?"

There is at least a grain of logic in the tradition, for, supposing the author to have given his thoughts expression by the light of the taper, it is no more than consistent to believe that we ought to approach their perusal by the same light, "if we would catch the flame, the odour." Moore, enraptured of the young May moon, gave it out that the best of all ways to lengthen our days is to steal a few hours from the night. But pilfering of this kind is, as we have said, injurious to health. Leigh Hunt was right when he said that sleep is best before midnight. He who burns the midnight oil is rarely one who rises with the lark, and lying late in the morning is never found in company with longevity. Besides it tends to create corpulence. Weak eyes and weary heads likewise follow nocturnal indulgences such as are the delight of a student. But remonstrances, forsooth, avail little. There is a fascination about midnight study and midnight composition more potent than the alarmist's notes of warning, and authors and students will probably continue to yield to its spell until authors and students are no more.

It is probable that the scheme which was proposed first by Mr. Shaw Lefevre, and which has been advocated by Mr. Bright, will form the basis of the contemplated settlement of the Irish land question by the present English Government. All landowners ready to sell will be given debentures bearing three per cent. for their property. There tenants will be charged four per cent. during a term of years—three per cent. being to pay interest on the debentures, and one per cent. to act as a sinking fund, so that at the end of the term the land will become the property of the occupier. In addition to this, large tracts of waste lands will be bought and let in lots of thirty or forty taces to peasants, and these lots will become hur property of the peasants after a certain nember of payments.

Under an Umbrella.

One day the duc de Berri happened to be taking a walk in Paris with his wife, and they were returning toward the Elysee when a heavy rain-shower came on. The two promenaders, being unprovided with umbrellas, took refuge under a *porte cochere* already tenanted by a young man with the appearance of a clerk, who had an umbrella. When the storm had somewhat abated, the duc de Berri stepped up to the young fellow and asked whether he would mind lending the umbrella to enable him—the duc—to take his wife home. The other was suspicious and decidedly objected to parting with his property on any conditions. The duc persisted, but finding that there were no hopes of obtaining a loan of the coveted object, he asked its owner whether, though not having sufficient confidence in him to lend it, he would mind offering the lady his arm as far as her residence. The gallant young clerk willingly agreed to do so, and off the duchess and her escort accordingly started. The latter individual, very garrulous by nature, soon opened a conversation by the query as to whether his companion lived in the quarter they were then in. "Quite close to here," replied the duchess. "It is a splendid quarter, madame, plenty of luxury and very *comme il faut*. In fact, it is the *grandes dames'* quarter, with nothing but duchesses and marquises in it, with their dresses all worked in gold." "Quite so.' "I don't know whether madame has noticed the fact, but generally the less elevated a person's grade of nobility the higher the floor he or she occupies." "There is some truth in that," gravely responded the duchess.

"For instance," pursued the theorizer, "you will usually find viscountesses and baronesses on the fourth floor, and if madame happened to be a viscountess I would wager that I know the floor on which she lives—the fourth, that is"—"Not low enough, sir!" said the lady. "Oh, well, then, madame is very likely a comtesse?" "Lower still," observed his companion. "Indeed!" madame must be a marquise, then?" "My floor is lower yet," replied the duchess, who had found it very difficult to avoid laughing outright. Just at this moment they arrived at the Elysee, the guard, of course, presenting arms in due form. The proprietor of the umbrella felt inclined to shrink into himself, and was beginning to stammer out some excuse when the duchess cut him short by thanking him very heartily for the services he had done her, and stating that she would not forget it. The young fellow returned to his employer, a wealthy man of business, and recounted his adventure, not quite recovering from the, to him, unaccustomed effect of the society of a duchess for the remainder of the day. Before the expiration of a week he received from his quondam acquaintance of the Elysee an umbrella richly adorned with silver.

Less Anxious to Fight a Duel.

(From the New York Times.

The lie passed between Wolf von Scheirbrand, one of the reporters, and Gallus Toman, the assistant editor of the *Frie Presse*, of Brooklyn, and the former sent the latter a challenge to mortal combat. Von Scheirbrand was once in Kaiser Wilhelm's army, and is said to be of noble lineage. Toman is a Greek; he speaks five languages with ease, saw service in the union army during the rebellion, and is said to be an adept with pistols. The law reporter of the same journal, Sigismund Kander, was called to be second to Mr. Toman. and he conveyed to the German his principal's acceptance of the challenge. The terms of the match, as fixed upon by the challenged party, were pistols, three shots, the first at fifteen paces, the second at ten, and the third at five, the man who retreated before the programme was carried out to be posted as a coward. Von Scheirbrand jumped at these terms and wanted to fight forthwith. He purchased a pistol, sent his wife to Pennsylvania, and settled his affairs. A hitch occurred. Mr. Toman's second insisted on delaying the duel until some convenient spot might be found where the principals might have their fun without interference. The German swore Toman was a coward, and refused to delay an hour. Thus the matter stands. Scheirbrand's pistol is loaded, primed, and ready, like its owner, for immediate action. Toman has not yet found the convenient spot, disinterested persons say he has not yet neglected his editorial duties in the search. Chief of Police Campbell does not place so much confidence in the determination of either of the gentlemen to fight to consult council as to whether he is empowered to act in the matter.

Lost Explorers.

COMMANDER CHEYNE ON THE TRUE CAUSE OF THE ANNIHILATION OF FRANKLIN'S EXPEDITION.

Commander Cheyne has written the following to the New York *Herald*:

Franklin's companies were starved to death by the contractor who supplied preserved meats—or, rather, preserved filth—to the Erebus and Terror. This statement I make upon clear and undeniable grounds, as follows: The contractor who supplied Sir John Franklin's expedition also supplied the first searching expedition under Sir James Clarke Ross with preserved meats. What was our experience? In very many instances eight-pound tins labeled "roast beef" and "roast mutton" were found to contain nothing b t bones. Meat tins contained rotten vegetables, but never the reverse. The public will hardly credit the statement when I say that the whole of the animals were preserved in tins excepting the horns, hoofs and hides; the very entrails and contents were preserved for our subsistence during an arctic voyage, when no other provisions could be procur ble. Often were we, in the midshipmen's mess of her majesty's ship Enterprise, compelled to hold our noses while we ate our dinners, so great was the stench, and often also, when the daily rations served out were taken on the quarter-deck for survey and condemnation, Sir James Ross' answer would be, "If I condemn those I might condemn half the provisions in the ship and then we should simply starve."

As one of the victims of that contractor's greed for money I feel the necessity of making these facts public. Now, what happened on board her majesty's ship Plover, another arctic ship sent in search of Franklin? On one day, in the arctic regions, 10,570 pounds weight of preserved meats from the same contractor were found to be in a pulpy, putrid state, and were condemned and thrown overboard as unfit for food. What happened at Malta and Deptford? Let others supplement this letter by details of the survey held upon his abominable meats at those places. What large quantities of his provisions were thrown overboard from her majesty's ship Herald in the arctic regions, doubtless Capt. Bedford Prim can and will disclose. Sufficient for me to say that, when serving in her majesty's ship Resolute on Capt. Austin's expedition, my eyes lighted upon this contractor's name on the empty tins lying about the beach at Beechy island, the first winter quarters of Franklin. I knew at once that starvation must have done its work and that Franklin's party fell victims, not to the severity of an arctic climate, but to this man's cupidity. Thank God the remains of Lieut. Irving, one of Franklin's officers, as known by a Royal Naval college medal found in his open grave, have been brought away by Lieut. Schwatka, commanding the American searching expedition, so that I trust a thorough investigation of all the circumstances will be demanded by the public, if only in common gratitude to those brave men who fell, one by one, in the service of their country.

Kind Heartedness.

It is a great blessing to be kind hearted and to be actuated by a desire to be of service to your fellow creatures. If you have the will to confer a favour or to make some one happy the opportunity will not long be wanting. The changes of fortune in this lower world are so frequent that the time is sure to come when you can accommodate your neighbour, and all this without serious inconvenience to yourself. For instance:—A German gentleman with slender means said to his neighbour, the Herr Baron, who lived in a fine house on the other side of the avenue, "My dear Baron, my daughter is to be married next week and I have come to ask if you will kindly lend us your equipage to take us to the church." The Herr Baron was not only kind hearted, but also very discriminating in his favours, so he replied, "My good friend I shall always be delighted when I can be of any service to you. My horses, however, are very large and stately, and I have noticed that people always drive very fast to and from a wedding. You will therefore excuse me if I refuse. But," and here he became very confidential, "if it should so happen at any time in the future that you need my horses to attend the funeral of any member of your family I shall lend to you with the greatest of pleasure."

The Irish Troubles.

It is sad to think of the misery endured by the Irish people for many generations, and sadder still to think that, after all that has been done to mitigate or remove the evil under which they labour, they are, to-day, in as deplorable a state as they ever were. Of course, we know it is the fashion of the time to lay the responsibility of all this on the land system of the country. It is not Parnell and his co-agitators alone who charge the sin of all this suffering on the landlords. Ever and anon we find the same sentiment cropping up in leading articles and paragraphs, in both American and Canadian newspapers. But the land system in Ireland, whatever may be its faults, is substantially the same as that which exists both in England and Scotland; and yet, neither of these have been kept in the chronic state of discontent and rebellion which has, unhappily, so long existed in the Island of the Saints. There is not so much dissimilarity in these countries, that we should not expect the same causes to produce the same effects in them all. But, while England and Scotland have enjoyed a large measure of prosperity and contentment, Ireland has had neither. Her people, as a rule, have been miserably poor; in fact, so much so as to be frequently on the verge of actual starvation, from which they have only been kept by the charity of others.

We are told, however, that the landlords in Ireland are not Irishmen; that they were not the original owners of the soil; that they got the land into their possession by confiscation and spoliation; and that they were placed over the Irish people for the purpose of alienating them from the Catholic faith and making Protestants of them. All this may be substantially true; and there may be a great deal in these facts to make the blood of the patriotic Irish student of history boil in his veins; but, after all, the events of three centuries ago can scarcely account for the misery of to-day. The landlords of England are not Englishmen. The followers of William the Conqueror who divided the country among them, and made slaves of the people, did not prevent England from rising. The Norman is the owner of the land to-day, but the Saxon and the Celt, whom he reduced to serfdom, eight hundred years ago, shows more largely than he does to-day both in wealth and political power. It is true that in England we do occasionally hear something about the tenure of land; but it is generally discussed in a calm and philosophical spirit; and, though there are political and social philosophers who believe the English land system ought to be reformed, nobody clamours for the summary ejectment of the landlords as a means of curing either the real or imaginary ills of the country.

The question with which we are brought face to face in this agitation which is going on in Ireland at the present time is, whether there is any such thing as property in land? And, if so, has the owner of the land a right to deal with it just as with any other sort of property; does the doctrine of Free Trade, which is, that every man has a right to buy in the cheapest market and to sell in the dearest, apply to this as well as to everything else? These are questions, however, which we do not propose at present to discuss. Assuming that the gigantic act of spoliation which, apparently, the Irish Land League is seeking to bring about, had become an accomplished fact; and that every landlord in Ireland was sent packing, would that make the Irish a prosperous, contented, and happy people? Could the little farmer, with his miserable patch of ground—often not more than an acre or two—even though he owned it, in fee simple, ever be anything but miserably poor? After all the nonsense which has been talked and written about the eviction of tenants, the fact is, that in nine cases out of ten, we suspect their forcible removal from the overburdened soil, which is no longer able to sustain them, would be the very best thing that could be done for them. One of two things is essential to the prosperity of Ireland, either that it be relieved of its surplus population, or that industries be started on a sufficient scale to give employment to the millions who cannot find it in the cultivation of the land. No country can ever be prosperous that depends upon the cultivation of the land alone. If manufactures had been fostered in Ireland as they have been in England and Scotland the probability is that it would have been in a very different position from what it is to-day.

As to the land agitation with all its revolting attendants of murder and arson, and every other form of outrage, whatever may be its immediate result, we are satisfied it will afford no considerable measure of permanent relief. Poor Ireland has suffered much from many physicians already, and we fear there is now suffering in store for her under the unskilful and blundering treatment of Parnell, Dillon and Co. Every lover of humanity will hope and pray that the evils with which she is threatened may be avoided, but it must be confessed the outlook at present is gloomy and distressing.

USEFUL RECEIPTS.

If brooms are wet in boiling suds once a week they will become very tough, will not cut a carpet, will last much longer, and always sweep like a new broom.

Cocoanut Pound Cake.—One pound of cocoanut grated; one pound of white sugar, one-fourth pound butter, six eggs, six tablespoonfuls of sifted flour, and one glass of brandy.

Yeast.—Boil a handful of hops, tied in a thin cloth, in a gallon of water for half an hour; then take them out and add to the water in which they were boiled, four grated potatoes, two large spoonfuls of salt and the same quantity of sugar stirred together in about a pint of cold water. Boil ten or fifteen minutes, or until the potatoes are done. When partly cold add some yeast to start it.

Cocoanut Pudding.—Take half a pound dessicated cocoanuts and two thick slices of bread; put them to soak in a quart of milk for two or three hours; then add an ounce of butter, two ounces of sugar, the yolks of four eggs, and a saltspoonful of salt; beat the whites to a stiff froth; add them to your pudding, and bake in a hot oven for three-quarters of an hour. Serve hot.

Angel's Food.—Take half a box of gelatine and one pint of milk, and put it on the fire, and, when the gelatine is entirely dissolved, add the yolks of three eggs, well beaten, and four tablespoonfuls of white sugar; let it boil a few minutes, then remove from the fire and stir in lightly the whites, beaten to a stiff froth. Flavor with vanilla, and pour into molds to cool.

Sponge-cake.—Twelve eggs, their weight in granulated sugar, and the same of flour. Beat the yolks of the eggs and the sugar well together; beat the whites to a stiff froth; sift the flour very lightly; add a teaspoonful of the beaten white of egg and one of the flour alternately till all is used; then add the grated rind and juice of a lemon. Put a well-greased paper in a tin baking-pan and bake the cake in it in a very hot oven; if it is getting too brown on top, cover with a piece of letter paper.

Tea Rolls.—Half a cake of compressed yeast in three half-pints of lukewarm water; add a quart of sifted flour, and mix well to a thick batter. Let it stand six or seven hours in a moderately warm place till well risen. Then add two eggs, an ounce of butter, four ounces of sugar, and a tablespoonful of salt; add flour, (about a pint,) and work well with hands till it is a soft dough. Make into rolls; put them in the pans they are to be baked in, and set near the stove to rise; as soon as they rise, bake in a quick oven.

The Opium Habit.

According to reports made at the recen meeting of the American Missionary Association, the labors of American missionaries have of late been reasonably successful. The mission in Burmah is a novelty, being self-supporting. In China the opium habit has proved the greatest foe to Christianity, and is met at every turn. As to the vast field of India, it is "yielding a glorious harvest. The years spent in patient preparation of the soil and in seed sowing have not been spent in vain. The results of many years seemed small, but it is well to remember that the seed of the Gospel, when faithfully scattered, will surely germinate sooner or later." In Turkey "a few of the Moslems are diligent readers of the Bible, but the day has not yet come when the Gospel can be preached to them openly. New Churches have been organized the past year, new schools opened, native pastors ordained, and many converts received." In Japan "results have appeared promptly in response to effort, and many societies have been attracted to this on account of its great promise. Several new missions have been established within two or three years, and stations are being opened in various parts of the empire." The African field is being occupied as rapidly as possible, and there is declared to be no reason for discouragement in that quarter.

A Woman Farmer.

One of the most enthusiastic admirers of Gen. Hancock in Ulster county, New York, is Miss Libbie Schoonmaker, whose career as a farmer, stock raiser, and school teacher has made her notorious in that part of the state. Miss Schoonmaker, who is a woman about 38 years of age, is a striking example of what a woman with a will of her own can do toward getting along in the world. Fourteen years ago, at the death of her father, Johannes Schoonmaker, she inherited a large estate, consisting principally of farming property, heavily encumbered with debt. It was the old homestead, and Miss Schoonmaker could not bear the idea of seeing it pass into the hands of strangers, and was determined that it should not. Although then only 24 years old, and with no more practical knowledge of life than an ordinary country lass, she assumed sole charge of the estate, determined to clear of debt. Having an old mother 62 years of age, a half sister, also helpless from old age, the two orphan children of a deceased brother, and a brother in the last stages of consumption, to provide for, this made her task doubly hard. A little experience taught Miss Schoonmaker that it was impossible to support her large family and keep up the interest arising from the heavy indebtedness of the estate from the resources of the farm. She accordingly began to devise some method of increasing her income, and decided upon school teaching. She was engaged to teach in her own neighbourhood at the modest sum of $8 per month. In this, as in everything else, she showed remarkable tact, and her salary in a short time was raised to $40 per month. She has continued school teaching ever since, overseeing and directing the work of her farm, night and morning, and during summer vacations going into the harvest field with the farm hands to pitch the hay, rake, bind, etc. She has earned from teaching school over $3,500, paid off the debt of the old homestead, and besider greatly improved the property. Besides teaching and raising corn and grain, she has been an extensive stock-raiser. As a farmer she has no superior in this section. Her wheat crop averaged this year forty-two bushels to the acre, the largest yield in the county.

In personal appearance Miss Schoonmaker is tall, with a robust, but comingly form, and and a pleasing, intelligent countenance. She is exceedingly kindhearted and generous, and and will spend her last cent for the benefit of a needy friend or acquaintance. A short time ago she learned that a brother-in-law living in Pennyslvania was in destitute circumstances. She went to him and found him helpless from an incurable disease, with a family depending upon him. "Ben," she said, "what can I do for you?" "Nothing Libbie," was the reply. "You have your hands full already. We will have to go to the county house, I suppose." "Never, Ben, as long as I live. Come and enjoy the comforts of the old homestead with me. I will keep you and your family as long as you live."

Miss Schoonmaker has had many suitors for her hand, but, although naturally inclined to matrimony, she steadily refuses to marry, on the ground that her husband might in time object to be burdened with the support of the old people and her helpless brother-in-law and his family, which might cause domestic troubles. Besides, she says she has enough to do now without having to support a husband, too, which she might have to if she were to marry.

Mr. Bartlett and the Baroness.

(From the London World.)

It is now generally understood among the Baroness Burdett-Coutts's friends and near relations that she has quite resolved to carry out her intention of marrying Mr. Ashmead Bartlett, but with the proviso that the settlements shall be all on her own side, and her money (such as remains to her) safely tied up. It is also believed that the marriage will not take place till all legal difficulties with regard to the Duchess of St Alban's will are cleared up.

The number of yearling thoroughbreds from the great breeding establishments of England sold during the past year aggregated 451, the progeny of 112 sires. They realized 89,996 guineas—a decrease in the amount paid to breeders of 41,773 guineas as compared with 1877, when 486 yearlings brought 131.666 guineas.

A London tailor has invented "the united suit," which consists of a man's complete attire in one garment.

SMILES.

Oleomargarine isn't dairy maid.

Chestnuts don't have wings, but are sort of burred-like.

What do "eating apples" eat and how do they do it?

Flowing locks—Those of a canel—when they're opened.

You will regret to learn that the Maharajah of Jeypore died last month.

The infanta of Spain has begun to take notice, and the King has ordered a bull-fight. The child's education will begin at once.

"Do you get any holidays in you office?" asked a returned divine of a cheery-looking worker in secular walks. "Oh, yes, we get a day to get buried on."

"Never borrow trouble," said a husband to his wife. "Oh, let her borrow it if she can," exclaimed the next door neighbour; "she never returns anything you know."

The boundary line between infancy and childhood has been passed when mamma's darling can no longer take castor oil without making a face like pickled tripe.

Beaconsfield's new novel is to be called "Endymion." We give the old gentleman this free notice as we hope his book will sell well and help him out, financially.

At a London bazaar recently a lady handed round her baby to be kissed at sixpence each. If it were a girl baby we would have paid the price and taken a due bill due in sixteen years.

A Brooklyn man sued a dentist for $500 damages, on account of pulling the wrong tooth, and recovered $30. The dentist, as he handed over the money, said it came out of him "like pulling teeth."

"Neter marry a woman," remarked an old observer, "until you have dined her at a public restaurant. If she calls for such dishes as pork and beans, or corn beef and cabbage, your future happiness will be secure in her keeping."

A rural chap who witnessed the unloading of Cleopatra's Needle says he don't wonder that the dusky Queen committed suicide by taking a viper to her bosom, if she had to sew buttons on Mark Antony's pantaloons with a needle nearly seventy feet long, or make shirts for the Jew dealers of Egypt at five cents a shirt.

The British Census.

(From the London Times.)

Three acts were passed in the recent session for taking the census of the population of the United Kingdom. The first relates to Ireland (43 and 44 Vic., cap. 28). Under the direction of the lord lieutenant houses are to be visited on Monday, the 4th of April, and other days, as appointed, and the population on the premises on Sunday night, the 3rd of April, to be ascertained, and among the particulars to be gathered is the "religious profession" of each inmate. There are penalties for withholding or giving false information, with a proviso that no person shall be subject to such forfeiture for refusing to state his religious profession. The provision is omitted in the other statutes. The next act (cap. 37,) relates to England, and the local government board is to superintend the taking of the census. There are householder schedules to be left in the course of the week ending Saturday, April 2, and to be collected on Monday, April 4, with particulars as to all persons who were on the premises on Sunday night, April 3, with penalties for neglect or false answers. The act as to Scotland is chap. 38, and the secretary of state is to superintend the census, and penalties are to be imposed for disobedience of the directions given as to householders' schedules. In the United Kingdom the census is to be as to persons on Sunday, the 3d of April next.

Eugenie's once lovely auburn hair is now nearly white, and her beautifully shaped face has become wan and thin.

"Change cars for New York," cried the brakeman of the Great Western Railroad express at Clifton, Ont. An old man had just changed routes, but not for New York. He expired alone and uncared for. He was over 70, had come from Council Bluffs. Thirty-three dollars in gold were found on him, together with $245 in bills tied in an old handkerchief around his neck.

MARKET REPORTS

CANADA LUMBERMAN OFFICE,
TORONTO, 15th Nov., 1880.

There is no change to note in reference to stocks of lumber on hand in this city. Local trade is good. Building continues brisk. Carpenters' wages may be quoted at $1.50 per day. The Northern Railway made great efforts to bring in outstanding sawn stuff from Gravenhurst, &c., and has succeeded in clearing the yards there. The storm of the past week, which proved so disastrous on Lake Ontario, has disorganized shipping to the United States, for the time being, but as soon as vessels can come up, to the balance of the season's trade will be completed. Vessels for Oswego are still in demand at $1.50. Prices are keeping up in New York and Boston for hardwood. In the former city the supply of walnut is limited, and the better grades of wood are arriving slowly. The Lumberman's *Gazette*, Nov. 8, states unsettled weather has had a damaging effect on the lumber trade. Prices firm. Freights on lumber rising. Recent sales shipped by rail.

WHOLESALE RATES.

Mill culls	$ 5 50	@	7 00
Shipping cull stocks	10 00	@	11 00
Shipping culls, (in box,)	8 50	@	10 00
Dressing inch	11 50	@	13 00
Flooring, 1¼ & 1½ in	12 00	@	13 00
Joisting and scantling	9 50	@	10 50
Mill run sidings	12 00	@	14 00
Pickings	17 00	@	20 00
Clear and pickings	25 00	@	28 00
Lath	1 25	@	1 40
Shingles, No. 1	2 10	@	2 20
No. 2	1 40	@	1 60

LONDON, ONT.

Common Lumber	$10 00	@	12 00
Stock boards	13 00	@	15 00
Clear in. and 1½ to 2 in	25 00	@	30 00
Bill stuff, up to 16 feet		@	13 00
over 16	13 00	@	14 00
Lath, per 1000 feet		@	4 00
Shingles No, 2, per M		@	2 65
per square		@	1 90

OTTAWA.

The following are quotations in the Ottawa market :—

12 in. stocks, good	$18 00	@	20 00
12 " S. culls	10 00	@	10 50
10 " good	16 00	@	18 00
10 " S. culls	9 50	@	10 50
Strips, good	17 00	@	20 00
" culls	6 50	@	7 50
Sidings, 1¼, 1½, and 2 in., good	23 90	@	26 00
" " culls	9 00	@	10 00
Lath (₱ 1,000 pcs.)	0 00	@	1 00
Deals (₱ Quebec standard) 1st	0 00	@	110 00
Deals (₱ Quebec standard) 2nd	0 00	@	65 00
Deals (₱ Quebec standard) 3rd	0 00	@	8 50
Cull deals (₱ M. ft.)	6 50	@	8 59

FREIGHT.

To Montreal, $1.15 ; Quebec, $2 ; Burlington, $2 ; Whitehall, $1.25 ; Albany, $3.50 ; New York, $4.

DETROIT.

Yard rates, continue as follows :

Uppers, all thicknesses	$40 00	@	45 09
Selects	35 00	@	38 00
Fine common, thick		@	30 00
No. 1 common stock, 1x12	16 00	@	18 00
Common shippers, 1x12	13 00	@	14 00
Flooring, select		@	25 00
common		@	22 00
Roofing, matched		@	16 00
Siding, clear		@	24 00
A select		@	20 00
B common		@	16 00
Ceiling, select		@	30 00
common		@	25 00
Shipping culls		@	12 00
Mill cull boards		@	10 00
Dimension or bill stuff to 16 feet		@	14 00
18 to 24 feet		@	15 00
longer than 24 feet	16 00	@	20 00
Shingles, clear, 18 inch		@	4 00
6 inch clear, 18 inch		@	2 75
Lath		@	2 25

BUFFALO.

We quote cargo lots :

Uppers	$35 00	@	40 00
Common	16 00	@	19 00
Culls	11 00	@	12 00
Assorted lumber in car lots or boat loads :			
3 uppers 1 inch	$	@	40 00
Do. 1¼ and 1½ in	40 00	@	42 00
Do. 2 in	45 00	@	47 00
Do. 2½ 3 and 4 in. special			
Pickings 1 inch	28 00	@	30 00
" 1¼ and 1½ in	33 00	@	35 00
" 2, 3, and 4 in., special	22 00	@	00 00
Shelving	22 00	@	00 00
Cutting up	22 00	@	24 00
Sidings, com., 1 in	16 50	@	17 00
" 1¼ in. and over	17 00	@	20 00
Common, stocks	16 50	@	17 00
Box, all thicknesses	13 00	@	14 00
18 in XXX shingles	3 40	@	3 50
18 inch clear butts	2 40	@	2 50
Lath	1 75	@	1 80

We quote wholesale prices of hardwood lumber, delivered on cars or boat :

Walnut ½ inch clear	$65 00
⅝ inch, 1sts and 2nds	70 00
¾ inch, 1sts and 2nds, 14 feet coffin stock	73 00
1 inch 1sts and 2nds	73 00
1¼, 1½, 1¾, and 2 inch	74 00
2½ inch and thicker	75 00
counters	130 00
newels 7x5 to 10x10	90 00
common in. & thicker	50 00
culls, inch	35 00
culls, 1¼ inch	35 00
White ash, Ohio 1st and fine 2nds	28 00
Whitewood, inch	30 00
⅝ inch	28 00
¾ in. coffin stock, 14 ft	30 00
square, 4x4 to 10x10	33 00
Chestnuts, 1sts and fine 2nds	30 00
Maple	25 00
White oak, Ohio	30 00
Cherry, inch and thicker	42 00
Butternut	45 00
Hickory, west Ohio	35 00

CHICAGO.

Report up to Nov. 5, states weather pleasant and receipts heavy. Piece stuff holds at $8.50 the total receipts of the year up to Nov. 2, has been 1,387,057,000 feet of lumber, and 571,029,000 shingles, which, compared with last year, is an excess of 120 million feet, but less than 100,000 shingles.

YARD RATES.

First and second clear, 1@ 1¼ in	$43 00
First and 2d clear, 2 in	45 00
Third clear, 1¼ @ 2 in	38 00
Third clear, 1 inch	38 00
1st and 2d clear dressed siding	20 00
1st com. dressed siding	19 50
Second common	17 50
Flooring, 1st com. dressed	34 00
Flooring, 2d com. dressed	32 00
Flooring, 3d com. dressed	24 00
Box bds, A, 13 in. and up	43 00
Box bds, B, 14 in. and up	37 00
Box boards, C	25 00
A stock boards, 12 @ 16 in., rough	37 00
B stock bds, 10 @ 12 in	33 00
C stock bds, 10 @ 12 in	27 00
Common stock boards	17 00
Cull boards	$10 00 @ 11 00
Fencing, No. 1	13 50
Fencing, No. 2	11 50
Common boards	12 00 @ 15 00
Dimension stuff	11 00
Dimension stuff, 20 @ 30 ft	12 50 @ 20 00
Small timber, 6 x 6 to 8 x 8	12 00
Round posts, cedar	15 00
Pickets, dressed and headed, flat	15 00
Pickets, do., square	20 00
Pickets, rough	14 00
Clear shingles	3 25
Extra "A" shingles	2 65
Standard "A" dry shingles	2 40
Shaded "A" shingles	1 10
No. 1 shingles	1 00
Cedar shingles	2 25
Lath, dry	2 25

OSWEGO, N. Y.

Three uppers	$38 00	@	40 00
Pickings	28 00	@	30 00
Pine, common	20 00	@	22 00
Common	14 00	@	16 00
Culls	12 00	@	14 00
Mill run lots	16 00	@	20 00
Sidings, selected, 1 inch	28 00	@	32 00
1¼ inch	28 00	@	35 00
Mill run, 1x10, 13 to 16 feet	16 00	@	20 00
Selected	20 00	@	25 00
shippers	15 00	@	16 00
Mill run, 1 and 1¼ in. strips	15 00	@	18 00
Culls, selected	20 00	@	24 00
1x6 selected, for clapboards	24 00	@	35 00
Shingles, XXX, 18-in. pine	3 00	@	3 50
XXX, 18-in. cedar	3 00	@	3 10
Lath	1 50	@	1 75

ALBANY.

FREIGHTS.

To New York ₱ M. feet	$ 1 00
To Bridgeport	1 25
To New Haven	1 25
To Providence	2 00
To Pawtucket	2 25
To Norwalk	1 25
To Hartford	2 00
To Middletown	1 75
To New London	1 75
To Philadelphia	2 00

Quotations at the yards are as follows :

Pine, clear, ₱ M	48@60
Pine, fourths	43@55
Pine, selects	38@45
Pine, good box	17@28
Pine, common box	14@17
Pine, 10-in. plank, each	38@42
Pine, 10-in. plank, culls	21@23
Pine boards, 10-in	25@28
Pine, 10-in boards, culls, each	17@18
Pine, 10-in. boards, 16 ft. ₱ M	28 00
Pine, 12-in. boards, 16 ft	28 00
Pine 12-in. boards, 13 ft	28 00
Pine, 1¼-in., siding, select	42 00
Pine, 1¼-in. siding common	18 00
Pine, 1-in. siding, selected,	40 00
Pine, 1-in. siding, common	16 00
Spruce boards, each	16
Spruce, plank, 1¼-in., each	20
Spruce, plank, 2 in., each	30
Spruce, wall strips, each	11@11½
Hemlock, boards, each	13
Hemlock, joist, 4x6, each	30
Hemlock, wall strips, 2x4	9½
Black walnut, good, ₱ M	85 00
Black walnut, ⅝-in	78 00
Black walnut, ¾-in	78 00
Sycamore, 1-in	28 00
Sycamore, ⅝-in	22 00
White wood, 1 inch and thicker	40 00
White wood, ⅝ inch	30 00
Ash, good	43 00
Ash, second quality	30 00
Cherry, good	60 00
Cherry, common	35 00
Oak, good	42 00
Oak, second quality	25 00
Basswood	25 00
Hickory	40 00
Maple, Canada	30 00
Maple, American	28 00
Chestnut	40 00
Shingles, shaved, pine..m	6 00
" " 2d quality	4 50
Shingles, extra, sawed, pine	4 25
Shingles, clear, sawed, pine	3 25
Shingles, cedar, mixed	2 75
Shingles, hemlock	2 00
Lath, hemlock	1 50
Lath, spruce	2 00

CLEVELAND.

ROUGH LUMBER.

Uppers, thick	$45 00
inch	42 00
Box, thick	36 00
inch	32 00
2½, 3 and 4 in c'ears special	
Flooring strips, 6 in, No. 1	34 00
2	24 00
Fencing strips, 6-in, No. 1	16 00
No. 2	14 00
Select common, thick	28 00
inch	24 00
Common	15 00
Culls	12 00
B. bds No. 1 12 in	25 00
No 2	16 00
No	14 00
No 1 18 ft	20 00
No 2 18 ft	18 00
No. 3 18 ft	15 00
Bill stuff to 18 ft	13 00
Bill stuff over 18 ft. adds 75c to $1 per ft. per M.	
Shingles, XXX	3 60
clear butts	2 60
Lath	2 25
Surfacing one side adds to the price of rough lumber	1 00
2 sides	1 00
Norway bds and strips	18 00
common	13 00

DRESSED LUMBER.

Flooring and drop siding clear	$40 00
box	30 00
select com	28 00
commom	20 00
Siding, ½ in. bevel clear	00
box	20 00
select common	15 00

Working lumber matching flooring and drop siding, $2 ; working ½ in. siding, $4.

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IN PRESS—TO BE PUBLISHED IN JANUARY, 1881.

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Gazetteer of British North America.

Containing the latest and most authentic descriptions of over 7,500 Cities, Towns and Villages in the Provinces of Ontario, Quebec, Nova Scotia, New Brunswick, Newfoundland, Prince Edward Island, Manitoba, British Columbia and the North-West Territories, and other general information, drawn from official sources, as to the names, locality, extent, ect., of over 1,800 Lakes and Rivers ; a TABLE OF ROUTES, showing the proximity of the Railroad Stations, and Sea Lake and River Ports, to the Cities, Towns, Villages, etc., in the several Provinces, (this Table will be found invaluable) ; and a neat Coloured Map of the Dominion of Canada. Edited by P. A. Crossby, assisted by a corps of Writers. Subscribers' names respectfully solicited. Agents wanted. ☞ PRICE $3—Payable on Delivery.

JOHN LOVELL & SON, Publishers.

Montreal, August, 1880.

PUBLIC NOTICE.

ALL PERSONS NOW SQUATTED upon any Public Lands within the Nipissing Crown Land Agency are hereby requested to apply without delay to John S. Searlett, Esquire, Crown Land Agent at Nipissing, and have their locations carried out in due form, failing which their claims cannot be recognized by the Department.

THOS. H. JOHNSON,
Assistant Commissioner.

Departm't of Crown Lands,
Toronto, 13th Oct., 1880.

DISSOLUTION OF PARTNERSHIP

THE PARTNERSHIP HERETOFORE existing between GEO. BENGOUGH and WM. DINGMAN, as Machinery Brokers, has this day been dissolved by mutual consent. All accounts will be settled, and the business carried on by Geo. Bengough under the name and style of Wm. Dingman & Co.

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WM. DINGMAN,

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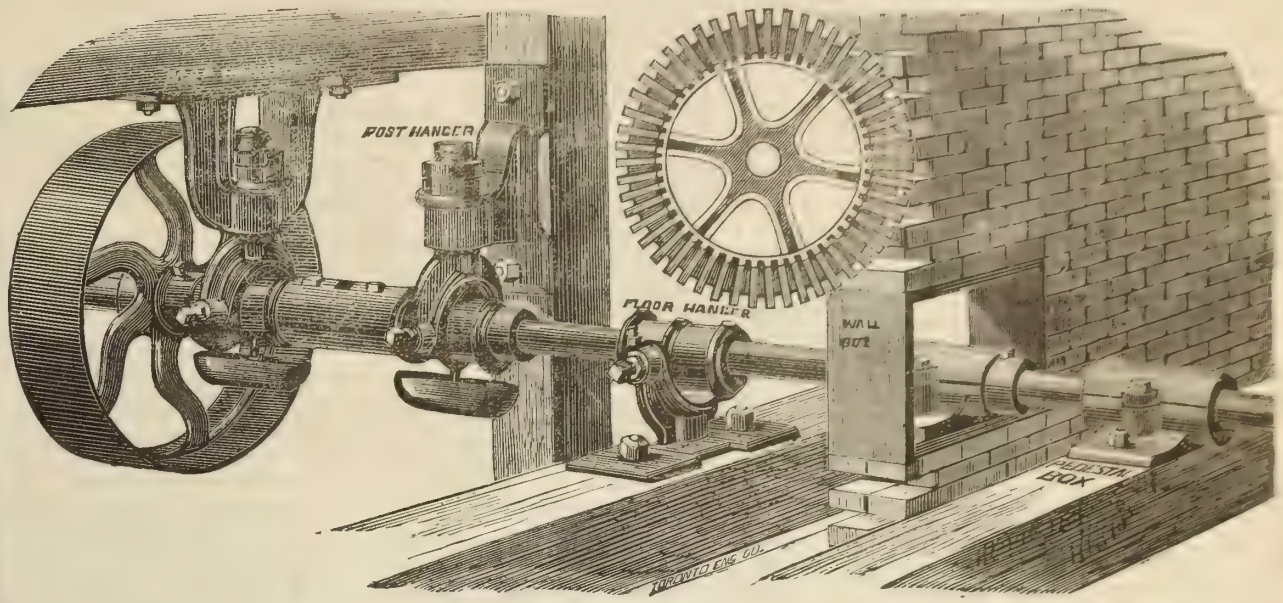

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RATE PER CENT., 7.81

That the above is a most satisfactory and profitable rate of interest will be conceded by all. But the careful attention paid to this, as to every other department, by the Directors of the **ÆTNA LIFE INSURANCE COMPANY**, will be more apparent when viewed in the light of the following figures, found in the latest published reports of 3 American, 3 British, and 3 Canadian Life Insurance Companies:—

NAME.	ASSETS.	INTEREST.	RATE.
Equitable, New York	$34,195,368	$1,950,680	5.70
Union Mutual	6,874,249	344,591	5.01
New York Life	35,630,557	2 021,887	5.67
London and Lancashire	851,720	37,325	4.38
Reliance, of London	2,379 410	109,720	4.61
Standard, of Edinburgh	25,939,685	1,120,255	4.31
Canada Life	3,070,988	199,504	6.49
Sun Mutual, Montreal	319,178	21,774	6.82
Mutual, Hamilton	88,068	4,684	5.26
Average	$12,149,797	$644,436	5.35
ÆTNA LIFE,	$23,761,342	$1,856,710	7.81
5 35 per cent. upon $23,761,342 is only		$1,271,131	

Upwards of **$585,000** was therefore realized in 1879 by the ÆTNA'S management from its **$23,761,342** over and above the average of the nine Companies. This is a point of great importance to persons desiring to insure their lives on the "WITH PROFITS" plan. ☞ All the profits in the **ÆTNA'S** Mutual Department belong to the Policyholders.

Receiving, as above shewn, a more profitable rate of interest on its funds, and also transacting its large business at a great saving in general expenses, compared with others, this Company is able to offer the public more favorable rates, as may be seen from the following examples. The three endowment columns show the premiums at 40 years of age:

$1000.

NAMES OF COMPANIES.	*Endowments, with Profits, at Death, or the end of*			*Death only, without Profits.*		
	10 Y'RS.	15 Y'RS.	20 Y'RS.	AGE 30.	AGE 40.	AGE 60
Canada Life	$110.40	$68.80	$50.30	$18.20	$25.90	$64.30
Citizens', Montreal	103.70	69.60	53.40	19.20	26.20	63.60
Confederation	104.65	68.70	50.05	19.08	26.04	62.76
Mutual, Hamilton	104.50	68.70	50.00	.....	.....	.....
Sun, of Montreal	106.90	69 40	51.70	16.90	24.60	63.90
Equitable of New York	106.90	69.49	51.78	.....	.....	.....
Union Mutual	106.90	69.49	51.78	.....	.....	.....
London & Lancashire	106.85	69.92	51.56	18.90	25.05	63.58
Star	.....	70.64	52.60	22.92	30.49	67.91
Standard	.....	.....	51.97	20.87	28.15	65.96
Average Premium	106.35	69.41	51.50	19.51	26.63	64.58
ÆTNA LIFE	97.43	64.46	48.77	17.20	24.37	61.98
ANNUAL DIFFERENCE	8.92	4.95	2.73	2.31	2.26	2.60

Besides this important difference in the rates (which is of itself a large dividend—"a bird in the hand") the **ÆTNA** makes a liberal cash dividend every year in reduction of the above profit rates, making in most cases a very much larger difference than here shewn.

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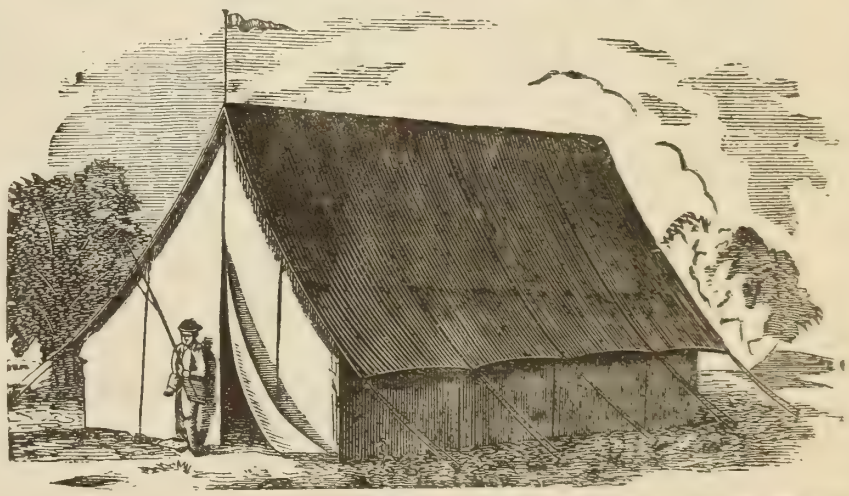

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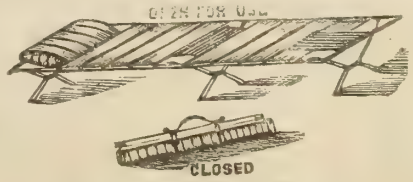

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A Story of Chopin.

At the little town of Zullichau, Chopin and his friend, finding that they had an hour to wait for horses, Professor Jarocki proposed a walk through the place. This did not take long, and as the horses were not ready when they returned, the Professor sat down to a meal—the post-house being also a restaurant. But Frederic, as if drawn by a magnet, went into the next room, and saw—oh, wonder of wonders!—a grand piano. Professor Jarocki, who could see through the open door, laughed to himself when his young friend opened the instrument, which had a very unpromising exterior. Chopin also looked at it with some misgivings; but when he had struck a few chords he exclaimed, in joyful surprise, "O Santa Cæcilia, the piano is in tune." Only the impassioned musician knows what it is, after sitting for several days in a diligence, suddenly and quite unexpectedly to have an opportunity of playing on a good instrument. Regardless of his surroundings our artist began to improvise *con amore*. Attracted by the music, one of the travellers got up and stood behind the player's chair. Chopin called out to Professor Sarocki, in Polish, "Now we shall see whether my listener be a connoisseur or not." Frederic began his Fantasia on Polish songs (op. 13); the traveller, a German, stood like one petrified, captivated by this music, so new and bewitching; his eyes mechanically followed every movement of the pianist's delicate hand; he had forgotten everything, even his beloved pipe, which went out unheeded. The other travellers stepped in softly, and at the same time the tall postmaster and his buxom wife appeared at the side door, with their two pretty daughters behind them. Frederic, unmindful of his audience, and absorbed in converse with his muse, had lost all thought of where he was, and that he must soon be on his way. More and more tender and graceful became his playing; the fairies seemed to be singing their moonlight melodies; everyone was listening in rapt attention to the elegant arabesques sparkling from his fingers, when a stentorian voice, which made the windows rattle, called out, "The horses are ready, gentlemen."—"Confounded disturber," roared the postmaster, while the triplet of ladies cast angry glances at the p stilion. Chopin sprang from his seat, but was immediately surrounded by his audience, who exclaimed with one voice: "Go on, dear Sir, finish that glorious piece, which we should have heard through but for that tiresome man."—"But," replied Chopin, consulting his watch, "we have already been here some hours, and are due in Posin shortly."—"Stay and play, noble young artist," cried the postmaster, "I will give you courriers' horses if you will only remain a little longer."—"Do be persuaded," began the postmaster's wife, almost threatening him with an embrace. What could Frederick do but sit down again to the instrument! When he paused the servant appeared with wine and glasses; the daughters of the host served the artist first, then the other travellers, while the postmaster gave a cheer for the "darling Polyhymnias," as he expressed it, in which all united. One of the company (probably the town cantor) went close up to Chopin and said, in a voice trembling with emotion, "Sir, I am an old and thoroughly trained musician; I, too, play the piano, and so know how to appreciate your masterly performance; if Mozart had heard it he would have grasped your hand and cried "Bravo." An insignificant old man like myself cannot dare to do so." The women, in their gratitude, filled the pockets of the carriage with the best eatables that the house contained, not forgetting some good wine. The postmaster exclaimed, with tears of joy, "As long as I live I shall think with enthusiasm of Frederic Chopin." When, after playing one more mazurka Frederic prepared to go, his gigantic host seized him in his arms, and carried him to the carriage."

Surely music has a strange power and fascination, when even a tobacco-loving German could allow his pipe to go out; and so indeed thought Chopin, when relating the incident to his friends in after years.

AMONG the royal people Forbes met were four kings up an opponent's sleeve at a card table.

AN extravaganza company advertised in Pittsburg that they would pay a reward to anybody who could find the shadow of a plot in "The Flock of Geese," the play which they performed. So few persons went to the theatre to search that the company disbanded, and the manager pawned a diamond pin to pay their fares to this city.

Garibaldi at Genoa.

(London News.)

Garibaldi's formal request for permission to visit his son-in-law was promptly and courteously answered. The arrangements were left entirely to his own convenience, and he choose to go down shortly after 11 o'clock this morning. As soon as the open carriage in which he reclined appeared in the streets a crowd, momentarily growing in numbers, and increasing in enthusiasm, surrounded it. The people, even in moments of wildest excitement seem full of tender pity for the maimed hero, and no desire to touch the hem of his garment will induce them to run the slightest risk of injuring him in a crush. This morning about a score of volunteers from the crowd linked arms and marched at the back and by the sides of the carriage to keep off the pressure. Within this corden walked one of the Garibaldians, an old grizzled soldier, who had supplied himself with an undersized alpaca umbrella. When the carriage, occasionally passing out of the shadow of the high houses, came into the sunlight up went the alpaca umbrella trembling in every rib from an undue expenditure of strength in the effort of opening it, and Garibaldi's head was sheltered from the sun's rays. As yesterday, all the house fronts were thronged, and once, as the carriage passed along the Via Roma, a shower of bright flowers rained from an upper window half filling the carriage, and casting undesigned largesse among the crowd.

The return journey was marked by similiar manifestations of enthusiasm, always, as it seems to me, tempered by tenderest pity. There is, perhaps, no parallel in the world to the peculiar regard of a people for a man such as is displayed in Genoa to-day, toward Garibaldi. He has been so strong in their behalf and is now so weak in his own, that tears start in the eyes of strong men, as they look upon him carried helplessly through their streets, bent, to-day, as ever, upon doing what he holds to be right, though the heavens fall. As the carriage neared the prison to-day I saw a well-dressed middle-age man force his way through the crowd till he was as close to Garibaldi as the girations of the alpaca umbrella made it safe to be. He uncovered his head, and with passionate gestures kissed his hand to the old man, who did not even observe his approach. This done, he quietly walked back to his shop and resumed business. If the people could only take up Garibaldi in their strong arms and nurse him back to health and strength, they would abandon all other occupations to perform this task of love and duty. They will do anything for him except work themselves up into a condition of dangerous excitement, because a not very wise man who chances to be his son-in-law has done a silly thing, and the civil authorities, inoculated with the prevalent folly, have thought it worth while to take him *au serieux*.

You Have no Excuse.

Have you any excuse for suffering with Dyspepsia or Liver Complaint? Is there any reason why you should go on from day to day complaining with Sour Stomach, Sick Headache, Habitual Costiveness, palpitation of the Heart, Heart burn, Water-brash, Gnawing and burning pains at the pit of the Stomach, Yellow Skin, Coated tongue, and disagreeable taste in the mouth, Coming up of food after eating, Low Spirits, &c. No! It is positively your own fault if you do. Go to your Druggist———and get a bottle of GREEN'S AUGUST FLOWER for 75 cents your cure is certain, but if you doubt this, get a Sample Bottle for 10 cents and try it. Two doses will relieve you.

A Stubborn fact.

Dr. Fowler's Extract of Wild Stawberry is, without a doubt, the safest and most reliable remedy in existence, for diarrhœa, dysentery, cholera morbus, sour stomach, sea-sickness, and all summer complaints. It acts like a charm. Its effects are marvelous—relief instantaneous, cure speedy, Physicians and all who use it recommend it. It should be kept in every home at this season, for use in cases of emergency. For sale by all dealers.

SEVERAL noblemen in England are in the habit of giving special orders to makers in Virginia for their supply of smoking tobacco. There is no doubt that by that means they get the very best tobacco to be had, but it costs them about $2 a pound. The workingman of Canada are smoking the very same quality of tobacco at 60 cents a pound, and it is known to them by the name of "Myrtle Navy."

SUMMER COMPLAINTS, OR CHOLERA INFANTUM, which is carrying off the infants and the children by the the thousand at this season of the year, can always surely be checked and cured by Dr. Fowler's Extract of Wild Strawberry. It has never failed to give immediate relief in the most severe cases. It is a boon within the reach of every mother. Do not fail to give it a trial; you will be pleased with its charming effects. For sale by all dealers.—T. MILBURN & CO., Toronto.

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Yours truly,
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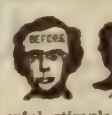

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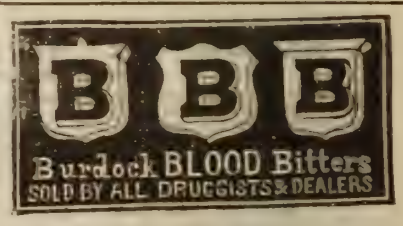

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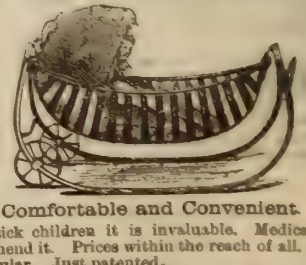

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For sick children it is invaluable. Medical men recommend it. Prices within the reach of all. Send for circular. Just patented.

E. WILBY, Manufacturer, Toronto

Killed by a Mustang.

A Tale Told in a Texas Cow Boy's Camp.

(From the Cincinnati Enquirer.)

It was a clear moonlight when, after a hard day's "drive," and the herd of wild horses had been penned, the cow boys stripped their tired ponies of saddles and bridles, and stalked them out to graze on the thick mesquir grass which fringed the bank of the San Bernardo.

After this duty had been attended to, the cooking utensils were brought forth, and soon the coffee pot was singing a musical little song, and a leg of fresh calf ribs spluttering before the fire. The repast, though rough, was made enjoyable by an appetite which only violent exercise and pure air can give, and after the boys had eaten until it became necessary to unbuckle their six-shooter belts, blankets were spread under the branches of a live oak, which seemed to stand guard over the broad expanse of prairie, and they settled down for a quiet smoke."

"I tell you what, boys," said Ned Curtis, who was one of the hardest riders and best poker players west of the Brazos, as he lit a cigarette, "we are going to handle some pretty rough mustangs to-morrow, and if any of you fellows want to show your fancy riding you had better be fixing your flank girts and rolls, because there are some unbranded four-year olds in that bunch, who are going to make you hum like a churn-dasher, and you'll have to fork 'em deep to stay in the saddle. There is one in the pen thar is a perfect picture of the mustang mare that sent Bill Hall to the angels."

"Wasn't he some galoot from the old States?" inquired one of the boys, turning over on his blanket.

"Yes," replied Ned, "he was a long tow-headed chay, greener than an August persimmon, with legs shaped like a pair of hames."

"How did he happen to get killed, Ned? Did the mare flirt him a little too strong?"

"Yes, that was the way of it. You see, he had just come from Georgy, and had never been on the back of a wild horse before in his life, but he was spunky with all of that, and wasn't scared of anything. One day, while driving out in Nueces County, we made 'round up' of all the horses in the range, and after 'cutting out' all that were in the 'diamond P' brand, the boys began throwing come down and riding 'em, just to see the wild devils 'buck.'

"Well, Bill Hall took a darn fool notion to ride one himself and he picked out a little Roman-nosed mustang mare, pure Spanish, and wilder than a cayotte, and got some of the boys to help him throw her down, because he didn't know any more about handling a lariat than he did about running a prayer meeting.

"When the saddle had been strapped on her and Bill forked it, she was turned aloose, and the crowd stood back to see the fun. Well, sir, that plug raised her head, looked back, bellowed a couple of times, and then she lit into the prettiest bucking I ever looked at. 'Stick to her, Bill!' I yelled, but the only thing he could say was, 'Whoa! Stop her, boys; darn her old hide.'"

"While he had his knees gripped to her sides like a vice, and his hair standing like a brush heap, the mustang stretched herself out like a step-ladder, put her head between her front legs, and then, bringing herself together like a rat-trap, she slammed Bill Hall against the ground harder than I ever heard a fellow hit before. When we picked him up one ear was jammed around to the back of his neck, and from the look on his face, we knew that he wasn't long for this world. He lingered for a day or two, and we did all we could to ease his pain, but one morning he motioned for us to come to him, and as I kneeled beside his couch and took his hand in mine he said: 'Boys, I'm going to pass in my checks, but I ain't going to shiver about it, even if I do die out on a prairie, with no one but a few friends around me. I'll have a big broad bed to rest in, and if some day you ride by my grave won't you get down and think of me awhile?'

"Well, sir, the boys—the ornary cusses—were crying like women, and I felt terribly shaken myself, but we all promised that we would, and then he raised himself a little, and in a faint voice said: 'Ned I want you to write to my mother and tell her that I wasn't a very dutiful son, but I loved her just the same.'

'Ned,' he muttered so faint I could hardly hear him, 'don't tell my folks when you write that I was slid into Heaven by a d—d mustang," and with that his head fell back, his grasp on my hold relaxed, and Bill Hall was on this earth no more, and when I thought how his mother would grieve it made me feel weak in the knees.

"We buried him, and Jack Jones, who is something of a scholar because he had a chance to go to school down in Bay Prairie, wrote on the headboard of the grave:

"WILLIAM HALL
GOT A FALL,
Killed dead as a Slug
By a Texas Plug.
BORN IN GEORGY,

"It always makes me feel bad when I think of that poor fellow, and how to-day he sleeps on the bank of the Santa Gertrudes with nothing but a big live oak to mark his last resting place in the bosom of the prairie. Do any of you fellows want a little draw-poker to-night?"

From the Talmud.

"Who is strong? He who subdues his passion. Who is rich? He who is satisfied with his lot." "He who sacrifices a whole offering shall be rewarded for a whole offering; he who offers a burnt-offering shall have the reward of a burnt-offering; but he who offers humility to God and man shall be rewarded with a reward as if he had offered all the sacrifices in the word." "There are four characters in scholars: Quick to hear and quick to forget, his gain is canceled by his loss; slow to hear and slow to forget, his loss is canceled by his gain: quick to hear and slow to forget is wise; slow to hear and quick to forget, this is an evil lot." "There are four characters in those who sit under the wise; a sponge, a funnel, a strainer, and a bolt-sieve. A sponge, which sucks up all; a funnel, which lets in here and lets out there; a strainer, which lets out the wine and keeps back the dregs; a bolt sieve, which lets out the pollard and keeps back the flour." "He who has more learning than good works is like a tree with many branches but few roots, which the first wind throws on its face; while he whose works are greater than his knowledge is like a tree with many roots and fewer branches, but which all the winds of heaven cannot uproot." "If thy wife is small, bend down to her and whisper in her ear. He who forsakes the love of his youth, God's altar weeps for him. He who sees his wife die before him, has, as it were, been present at the destruction of the sanctuary itself—around him the world grows dark." "He who marries for money, his children shall be a curse to him." "Rabbi Jose said, I never call my wife 'wife,' but 'home,' for she indeed makes my home." "Underneath the wings of the seraphim are stretched the arms of the divine mercy, ever ready to receive sinners."

A Neat Reply.

Dr. Mountain, chaplain to King James I., waiting upon his majesty when he was walking in St. James' park, the king said to him that he was more troubled how to dispose of bishopric of London, which was then vacant, than ever he was in his life. "For," said he, "there are many who apply with so strong an interest that I know not to whom to give it." "How?" said the chaplain. "If your Majesty had as much faith as a grain of mustard seed, you might say to this mountain: 'Be thou removed and be thou cast into the sea.'" It is said that the king rewarded this piece of ready wit by the immediate bestowal of the mitre.

THE late President Thiers was again honoured in Paris, a few days since, by the unveiling of a statue, with the inscription, "First President of the Republic." He holds the map of France in his hands, with the word "Belfort" standing out in large gilt letters, indicating the fortress which he successfully expended his every effort to wrest from the Germans.

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LEATHER BELTING!
ALL GENUINE HAS A STAR On head of rivets
SEND FOR CATALOGUE AND PRICE LIST.
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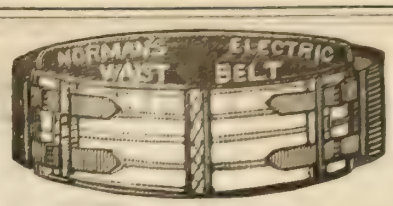

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Ask for Norman's Electric Belts and you will be safe against imposition, for they will do their work well and are cheap at any price.

TESTIMONIALS.

A. NORMAN, Esq. WATERVILLE, N. B.
Dear Sir,—Please send me a waisa belt. Enclosed find price. Head band got for my wife has almost cured her of neuralgia. Yours truly, C. L. TILLEY

MR. NORMAN, DALKEITH, ONT.
Dear Sir,—I am pleased with the belt I got from you, and wish you would send circulars to the following addresses. Yours truly, N. M

MR. A. NORMAN, HOLGRAVE, ONT.
Dear Sir,—The belt I got from you last September did me lots of good. I was not able to work then, but I am now. Please send me another and a pair of kneecaps and two pairs of insoles. Enclosed am not 21. Please send them by mail. Yours truly. JAMES PEARES

Numbers of such testimonials can be seen at my office, proving that they are doing a good work and worthy the attention of all sufferers. Circulers free. No charge for consultation.

BATHS.

I have entirely refitted my establishment with marble and other baths, which are now the best in the city. Electric, sulphur and vapor baths and hot and cold baths always ready. Ladies and gentlemen whether invalids or not, will find these baths toning, strengthening, cleansing, enlivening, cheering and comforting. Come and try them.

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N.B—Trusses for rupture, best in America, and Electric Batteries always on hand at reasonable prices.

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THE "PEARL"

DRY HOP YEAST
No Family should be without it. Ready in a moment, and unaffected by time or weather.
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PEARL YEAST COMPANY,
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DIAMONDS
WILL CUT,
AND THE
Improved Diamond and the Hanlan
Cross-cut Saws will cut faster and stay in order longer than any other saw in the world. They are manufactured only by
R. H. SMITH & Co., St. Catharines.
and Sold by the Hardware Trade everywhere. Take no other. We also make the Lance Tooth, Lightning, Improved Champion, Eclipse, in short, all kinds and patterns, including the New Improved Champion.
"St. Catharines Saw Works."

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MYRTLE NAVY
IS MARKED
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IN BRONSE LETTERS.
NONE OTHER GENUINE.

BURDOCK BLOOD BITTERS.

National Pills, superior to all other purgatives in strength and virtue, in safety and mildness of action.

VALUABLE DISCOVERY
BY MRS. JULYE MYERS.
Drawing and Healing Salve.
The Drawing and Healing Salve cures Carbuncles, Abscesses, Felons, without the aid of a knife.
The Drawing and Healing Salve cures Erysipelas and Ringworms.
The Drawing and Healing Salve cures Piles and all Poisoned Flesh.
The Drawing and Healing Salve cures Corns, Inflamed Joints, Chilblains, and Frostbites.
Price, 25 and 50 cents a box.
Mrs. Julye Myers' Rheumatic Cure.
A Positive Cure for Rheumatism, Neuralgia, Weak Backs, Sprains, Stiffness of Joints, Severe Aches, Cramps, &c.
Price $1 per bottle; trial bottle, 10c.
For sale by all druggists. General agents for Canada, J. COOMBE, 154 King st. East, Toronto.

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SURE CURE!
Has NEVER failed to cure
CATARRH, NEURALGIA,
and Nervous Headache.
Cold in the Head, Stoppage of the Nasal Passages, Deafness, Dizziness, Dimness of Sight, and all kindred complaints arising from neglected colds and Exposure.
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If our "Sure Cure" be regularly and persistently used as directed by labels on each box, we guarantee relief in every case, and an absolute cure in all cases where the patient is free from constitutional ailments.
SIGNS OF CATARRH.—Sickening and disgusting mucus from the nostrils, or upon the tonsils; watery eyes, snuffles, buzzing in the ears, deafness, crackling sensations in the head, intermittent pains over the eyes, fetid breath, nasal twang, scabs in the nostrils, and tickling in the throat, are sure signs of this dread disease.
Our Terms:—We express or mail "Dobyn's Sure Cure to any part of the Dominion for *ONE DOLLAR PER SINGLE BOX*, or *THREE BOXES FOR TWO DOLLARS.* In ordering, please write your Name, Post Office and County *plainly*, and send money by Post Office Money Order, or by Registered Letter. Address all orders to the Canadian Agents and Manufacturers.
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USING BEST FRENCH BURR MILL-STONES. SIMPLE, EFFICIENT, PRACTICAL. CAN BE RUN BY ANY INTELLIGENT MAN, NO RENEWING PLATES AS IN IRON MILLS. GRINDERS WILL LAST A LIFE TIME.

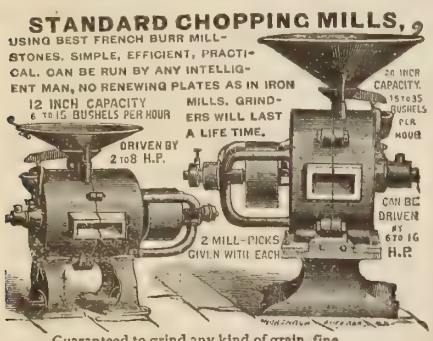
12 INCH CAPACITY 6 TO 15 BUSHELS PER HOUR

DRIVEN BY 2 TO 8 H.P.

30 INCH CAPACITY. 15 TO 35 BUSHELS PER HOUR

CAN BE DRIVEN BY 6 TO 10 H.P.

2 MILL-PICKS GIVEN WITH EACH



Guaranteed to grind any kind of grain, fine or coarse, equally as well, as a four foot millstone.

WATEROUS ENGINE WORKS CO., BRANTFORD, CANADA.

MILLSTONE

CHOPPING MILLS FOR LUMBERMEN.

Wil grind as fine as any four-foot stone.

Lumbermen, grind your own Horse Feed.

Make your own Flour with *our* Portable Grist Mill.

PRICE, Grist Mill complete, $600. Capacity, Our and a half barrels of good flour per hour,

Send for particulars, address

Waterous Engine Works Co.,

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MACHINERY OILS!

To Dealers and Consumers.

STOCK OLEVINE,

Equals Castor Oil, and

Warranted not to Gum.

STOCK OLEVINE

Equals Castor Oil, and

Warranted not to Gum.

It will give the subscriber much pleasure to forward, post free, to any address, on application, pamphlet, containing instructions and information that have been found of the greatest practical use to dealers and consumers of machinery oil in Canada. It contains the fullest information as to the different kinds of oils, their qualities and uses, thus enabling the consumer to make choice of the very oil best adapted to his wants, and also enables the merchant to select the kinds most likely to be in demand in his neighborhood. This pamphlet shows conclusively that oils properly manufactured from petroleum, are vastly superior to any *animal* or *vegetable* oil. I am now making the same qualities of "Extra" and "XX" oils I manufactured from 1870 to 1873. They are *guaranteed not to thicken wit extreme cold*, and warranted to give satisfaction in every particular. Beware of Agents soliciting your orders without my trade-marked order-book. Address

GEO. B. STOCK,

P. O. Box 1146, Toronto.

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MANUFACTURERS OF

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Fire Engine Hose, Lace, Leather,

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VOL. I.—NO. 4. TORONTO, ONT., NOVEMBER 30, 1880. PRICE FIVE CENTS.

MIRAMICHI.

The *Timber Trade Journal* commenting on the trade at Miramichi says :—

Miramichi (conversationally pronounced *Merrimashee*) has always stood next to Quebec for the quality of its yellow pine produce, and some years ago its hewn timber sent here was esteemed by many, who were good judges, to be better on the whole even than that of Quebec, more free from small knots, and *kinder* to work (to use an expressive term in joinery) ; but it stood second to it usually at market, because it was not so well squared, nor turned out of hand so evenly. But, as that district has not so great a choice of interior forests to draw its supplies from as Quebec (which intercepts all the rafts coming down the mighty St. Lawrence, between it and Montreal), its timber gradually became of smaller average size than that of Quebec, and eventually it was found more profitable to convert it into deals, boards, and scantlings, and its hewn timber has therefore almost disappeared from our markets, as may be proved by the fact that, out of over 150,000 loads shipped there this season, 824 only were hewn pine timber and 883 birch.

Miramichi was one of the ports that were late in opening this year, or rather that vessels could not reach till some time after the port itself was free from obstruction on account of the drift of ice between Cape Rae and the Magdalen Islands, and from subsequent information as to drought all along that coast, and the stoppage of mills for want of water—which was dwelt on by correspondents in August last as serious impediments to our further supplies from the lower ports—a diminished export was strongly insisted on from those regions. Even if supplies, contrary to expectation, should be up to the average there for shipment to this country, another difficulty was exhibited to us—there would not be enough ships to fetch it away. Late arrivals out, and long passages home, had thrown the bulk of the spring fleet into the month of August, and not many of them, it was argued, would be able to accomplish a second voyage. At all events few, if any o them, have completed their second voyage yet ; but, despite these obstacles, we cannot accuse Miramichi of being any party to such deficiency. as may eventually appear, when the Board of Trade returns come to be made up at the year's end, as will be seen by referring to the statement issued to the 2nd of Sept. last and compared with the exports of the two previous years. In 1878 the United Kingdom imported a great deal more timber than it had any need to have done of which Miramichi furnished us with the principal part of 78,321,890 M. feet, or 130,536 loads. But having large stocks in this country when the next season began, and trade going from bad to worse, in 1879 the export trade of Miramichi fell off in like proportion, and in that year the shipments only reached 69,586,919 M. feet, or 115,979 loads. But this last year of 1880, always reckoning each year from September to September 2nd, reached the total of 89,274,856 M. feet, or 148,791 loads, 14 per cent. more than 1878, and 25 per cent. more than 1879. So much for the anticipated shortage in the colonial timber, as far as Miramichi is concerned. The proportion of Miramichi exports to this country may be reckoned as four-fifths of its whole production, if not something more ; but we shall probably get more exact returns later in the year.

OTTAWA VALLEY LUMBER TRADE.

A despatch from Ottawa dated, Nov. 20th, states, that the total value of products of the forest sent from the port of Ottawa in 1879 was $1,199,844, as against $1,518,623 for the first three-quarters of the current year. This was largely represented by lumber, the quantity being as follows : Last year 117,002,000 feet were exported and for the first nine months of the current year 139,056,000 feet. The total cut of lumber by the mills of this immediate locality this current year is about 235,000,000 feet, representing a value of nearly three million dollars. The following is the estimate ; E. B. Eddy. 40 000,000 feet ; Bronson & Weston, 37,000,000 ; Perley & Pattee, 30,000,000 ; J. R. Booth, 30,000,000 ; Gilmour & Co.'s mill, 30,000,000 ; Sherman, Lord & Co., 25,000,000 ; Capt. Young, 13,000,000 ; McLaren & Co., 15,000,000 ; McClemont & Co., 10,000,000. The price of stocks during last season ranged at from $12 to $15 per thousand and this year from $12 to $18. A leading lumberman says the prospects are that the market will rule about the eame next year as it has this. No contracts have been made yet by any of the Chaudiere or Hull firms to his knowledge. The production of lumber will cost more the coming season than it has this owing to the advance in wages which will about cover the difference in price of stocks this year over last. There were sixteen hundred thousand logs received this summer as against nine hundred and seventy thousand last year, being the second largest quantity ever brought down to the Chaudiere. In the history of the Ottawa Valley, 1873 was the best year, 1,750,000 logs having come down. It is estimated that 1,700,000 or 1,800,000 logs will be taken out this winter. The outlook regarding the lumber business and timber trade is most encouraging. Thirty-five rafts of square timber were brought down the past summer, as against thirty in 1879. Next year it is thought that ninety rafts will come down.

DESTRUCTION OF FORESTS IN NEW ZEALAND.

Notwithstanding the fact that total the area of forest Crown lands in New Zealand amounts to no less than 10,158,870 acres, fears are being officially expressed that the destruction of trees is carried on so rapidly as to endanger the future supply of timber in the Colony. The report of the Crown Lands Department for the year ending June 30 last, states that the stock of some of the most valuable timber trees is being exhausted more quickly than it can be replaced by the natural growth of young trees, and in a wasteful manner which is, in the future interest of the Colony, much to be regretted. It is estimated, for instance, that, although the noble and valuable Kauri forests cover an area of 230,000 acres, and, reckoning only two trees to the acre, and 5,000 feet of timber to each tree, contain altogether about 2 300,000,000 feet of timber, the whole existing supply will be exhausted within twenty-one years at the present rate of destruction. These Kauri forests are very susceptible to fire, and, when once started, will burn with great fury. Besides this source of danger, the young plants are liable to destruction by cattle, and their growth is thwarted in various other ways. The relative proportions of the various other timber trees in New Zealand are only imperfectly known ; but recent examination has shown that, besides the Kauri, several of the more highly prized kinds are being rapidly exterminated. Such an event would be deplorable from many points of view ; for, not only would the resources of the Colony be seriously crippled, but its climate must suffer from the denudation of its forest lands.

BRITISH COLUMBIA

This Western Province of the Dominion of Canada, including Vancouver and other islands, has an area of 330,000 square miles. It has a seaboard, and an air line, of 550 miles. Throughout the whole extent of the Province there is an abundance of forest land, the timber on which is of the most valuable description ; one kind especially, says the Standard Atlas, the Douglas pine, yields spars from ninety to one hundred feet in length, without knots or branches. The diameter varies from six to ten feet, and in quality is about twice as strong as Canadian red pine, and being more gummy, is more durable. At Burrard Inlet, nine miles from New Westminister there are pine trees twenty-seven to thirty feet in diameter. The yearly exports of timber amount to about $500,000, but the vast forests have hardly been touched.

The mineral resources of British Columbia are very great. Gold is found in great abundance in the Cariboo district, and along the Fraser and Thompson rivers. In 1870, the yield from the Cariboo district exceeded one million dollars, while the yield for the entire province for the past ten years has exceeded twenty-two million dollars. Silver and copper are also to be had in abundance, but the mines have not as yet been very largely worked. The true wealth of the province, however, is its coal fields, which are inexhaustible, easy of access, and easily worked. Bituminous coal is found on Vancouver Island. The latter has been sold in San Francisco at $20 per ton. The annual exportations of coal exceed $200,000.

COMPLIMENTARY.

We have to thank Messrs. Waterous, of Brantford, for the complimentary terms in which they have referred to the LUMBERMAN. We are glad to notice from the *Monetary Times* of the 19th inst. that Mr. Peter Loggie's mill, Chatham, N.B., can saw 84,000 feet of lumber in ten hours, and that it has turned out 4,000,000 superficial feet in six months, between 18th May and 15th Nov. this year. The machinery of this 35 horse power steam mill was built about four years ago by the Messrs Waterous, and has worked satisfactorily ever since.

—Estimated quantity of square pine timber to be taken out on the Upper Ottawa and tributaries this winter received, and will appear in next issue.

The Epizootic.

A sick horse is not a nice object to chromo ;
Good health is essential to horse as to homo ;
But you won't cure the creature by giving
him bromo

And if you are prudent, possessing acumen,
You won't employ sulphur, or pills, or bitumen—
And just the same way if the patient is human.

Not any ! My friend, I'll reveal to you
what'll
Restore him. Just rest him and poultice his
throttle—
Don't dose him with anything out of a
bottle.

Ventilate. Fumigate. Feed him on gruel.
Wrap him up. Coax and caress him, for
you will
Save a sick horse by observing this ru-el.

Swab his nostrils with tepid like water or
brandy,
For he can't wipe his nose with his hoof, you
see, and he
Is so rigged he can't use a handkerchief
handy.

If a chap comes along with "a sure panacea,"
Go lead him right out of the barn by the
ea' ;
He's the fellow that is spreading the hiprhinorhea.

S. Cunard & Company.

A SKETCH OF "THE MODEL MERCHANT AND BUSINESS MAN."

Sir Samuel Cunard, who was the son of Abraham Cunard, was born in Halifax towards the close of the last century, and for some time was a clerk in the lumber yard. Soon after the termination of the war of 1812, we find him establishing himself in business, engaging largely in the West India trade, in a general importing business, in shipbuilding and exportation of lumber—in short, in almost every kind of mercantile undertaking that promised advantage to himself, or extended the commerce of the Province. He was a man of little education, but possessed natural business talents, quick perceptions, shrewd judgment, and an excellent address, which easily made friends for himself. He became well acquainted with the military and the navy, particularly the latter, who were stationed in the colonies longer then than now, and by this means gained great influence with people in high position in England, even with the nobility.

THE ORIGINAL PARTNERS.

of the firm consisted of himself and his brother Edward. Joseph, another brother, was afterwards associated with them, but spent most of his time superintending the lumber trade in New Brunswick. Chatham, Miramichi, owes its present advanced position chiefly to his enterprise. To Mr. Cunard is due the brisk trade with the East India Company in the article of tea. By his instrumentality the large ships of this Company visited us periodically, laden with the commodity pure and genuine, direct from China, until the East India Company monopoly was abolished. To meet the business that resulted from this trade,

THE CAPACIOUS WAREHOUSE ON WATER STREET.

was built, one half of it was devoted exclusively to storing tea, and the wharf premises were greatly extended. When steam came to be used as a motive power, steam vessels began to be looked upon as possessing greater advantages than the old sailing crafts, and the question was freely discussed, was it possible to cross the Atlantic by their means. The majority of people at once declared it an impossibility. They could not contain sufficient fuel for so lengthy a voyage, and winds and currents would prove too strong for paddle wheels driven by such an agency. These and many other reasons were asserted by Lardner, a celebrated scientist of the time, in the most positive manner, as proving the utter futility of the attempt. Some spirits braver than the rest determinod to give the matter a trial and the *Sirius* was well fitted up as

A PIONEER STEAMER,

and with the additional aid of sails, performed the trip to New York rapidly and successfully. She was followed by the *Great Western*, built in Bristol in 1837 or 1838. Her Majesty's mails had heretofore been conveyed across the ocean in sailing packets, or gun brigs, as they were called, and a voyage of twenty days was looked upon as a marvel. It is well known that the Hon. William Crane, speaker of the New Brunswick Assembly, had the honour of first suggesting to Lord Glenelg, then Colonial Secretary, the idea of subsidizing a line of steamers, but the suggestion was not carried out. Mr. Cunard, who was in England at the time, and whose mind was ever on the alert for any new enterprise, made representations to the British Government, who thereupon entered into a contract with him for the conveyance of the mails

FROM ENGLAND TO HALIFAX

and Boston by monthly steamships. He then formed a company, consisting of McIver & Co., of Liverpool, Burns & Co., and Napier & Co., of Glasgow, together with himself. These firms took portions of the contracts. The steamers, four in number, were constructed in the Clyde, and were propelled by paddle-wheels, the more modern screw propellor being then unknown. They were named the *Britannia*, *Acadia*, *Caledonia* and *Columbia*, were built of wood, presented quite a fine appearance, and from their novelty were looked upon somewhat with reverence, though they would look ridiculous now-a-days when placed beside the magnificent iron-plated ocean-going palaces of the same line, that unfortunately have been withdrawn from Halifax, but may be seen any day in the harbors of Boston or New York.

THE 'OLDEST INHABITANT'

would be glad to narrate to an open-mouthed gathering of listeners what an excitement the arrival of the *Britannia* in the port of Halifax created, how the wharves were lined with eager spectators to watch the monster of the deep as it moved up the harbour and how the delighted citizens entertained Mr. Cunard to a banquet. These steamers continued their voyages for some years until the *Columbia* was lost on Seal Island, off Cape Sable, on her way from Boston to Halifax. Passengers, mails and cargo were all saved. Hon. Abbott Lawrence, who had recently been appointed United States Minister to England, was among the passengers. Meanwhile the *Hibernia* had been built and was sent out in her place.

ABOUT THE YEAR 1842

in consequence of the over-speculation of Joseph Cunard in Miramichi, and the general panic that seemed to have taken hold of commercial affairs, the firm was brought to the verge of bankruptcy. Mr. Cunard came out from England and with the assistance of the Bank of Nova Scotia and his friends, Stephen DeBlois and John Duffus, who made loans to him on large estates which he owned in P. E. Island, the firm were able to float off the quicksands. He then went back to England and never returned to reside permanently. In course of time all liabilities were settled and the firm embarked in new ventures, increased the number of their steamships, and extend their navigation to Bermuda and St. Thomas. They also established a line to New York and Mr. Cunard's eldest son, Edward—afterwards Sir Edward—was sent there to take control of that part of the business. Among the undertakings engaged in by the firm was

THE AGENCY OF THE GENERAL MINING ASSOCIATION

which, up to the year 1859, had a monopoly of the mining business of this Province. It originated in this way. The Duke of York was desperately in debt, and in order to satisfy his creditors, his brother, George IV., made a grant of all the mines in Nova Scotia—coal, gold, silver, iron,—which belonged to the Crown—to Rundel, Bridges & Co., jewellers, in London, who disposed of them to this company formed for the purpose. This took place about the year 1835, and, as a result the Albion Mines in Pictou, and Sydney, and Lingan mines in Cape Breton were largely devoloped. Mr. Cunard became very wealthy, acquired landed estates in England and was made a Baronet, an honour he lived many years to enjoy. He married a sister of the late John Duffus, and had several children. Edward, the eldest, married a grand-daughter of one of the brothers Emmet,

FAMOUS DURING THE IRISH REBELLION,

and succeeded to the baronetcy, but died a short time after. His son, Sir Bache Cunard, is the present possessor of the title. William, the next, is still living, and is now on a visit to Halifax. Two of his daughters have been well known in the Maritime Provinces ; the one as the lady of Judge Peters, of Charlottetown, P.E.I., and the other as the lady of Colonel Francklin, who, with her husband, resided for several years in Halifax, and whose son is a partner in the present concern. The firm still goes by the old name, and now owns one of the largest fleets of steamships in the world. When Sir Samuel went to England in 1849,

WILLIAM CUNARD,

and Henry Boggs—the latter of whom was a nephew of Stephen DeBlois, and had been brought up in the office—carried on the business, and continued to do so until about the year 1852, when they, too, went to England, Mr. Boggs retiring from the firm. The late lamented James B. Morrow became a partner about that time. It has always been a problem whether the circumstances of the time combine to produce a man who from his connection with them, succeeds in winning a name for himself, or whether an original mind, by foresight and penetration, makes its own surroundings and becomes great of itself. We more readily incline to the latter view, but certain it is, in the history we have been endeavouring to trace, one name stands forth boldly as entitled, himself alone, to all the honour that can be given, for, by his own energy and skill, building up the trade of Halifax, for establishing a steamship company that has benefited the world, and for making himself

THE MODEL MERCHANT AND BUSINESS MAN

for our young men to follow for all time to come, and that name is Sir Samuel Cunard. —*Halifax Exchange.*

A Tramp to the 15 Mile Stream Gold Diggings.

These gold diggings are situated half way between the South Shore and Guysborough road, and eleven miles from Trafalgar Inn, managed by John Nelson, a place where travellers have to stop, and good accommodation for man and beast are provided. Although Mr. Nelson's vision has failed, yet he appears to be able to see as far into a granite rock as those whose eyes are sound. About a mile from Nelson's, you leave the Guysborough road, and with your guide make for the land of gold. When you travel seven miles, you reach a nice little lake that abounds with trout, known as "Dayspring" Lake, after the mission ship *Dayspring*. It was on the bank of this lake that the masts were taken for the mission ship. In 1867 claims were taken up, and quite a large sum has since been paid either for claims or royalty, and yet very little has been spent by the Government in opening up the road. The Government must consider the road favourably, and assist the owners of claims so that they may be able to get out machinery suitable for carrying on their operations successfully ; the present road being simply a path through swamps over rocks and brush wood. Provisions cost one dollar per hundred from Nelson's to the Diggings. Hall Brothers have been crushing for a week, and after cleaning up the battery they realized the nice little sum of 80 oz. of gold. The amount of quartz still to be crushed we would suppose will give twenty thousand dollars, what is already crushed can scarcely be missed from the large pile. Twenty-five men are engaged in the work. The owners had a handsome offer from an American Company, but by some mishap they did not succeed in selling, which I believe is a lucky event for Hall Brothers. They (Hall Brothers) are very quiet and unassuming men, and remarkably kind to strangers visiting their works, as all who are acquainted know. There are five houses. One 1½ storey building, two crushers, comprise the amount of buildings at these diggings at present. Quite a number are engaged prospecting. Claims taken up, besides Hall Brothers, are of great value, such as Morrison's free claim, Shand's, Grant's, Hudson's, Doran's, the Eagle Nonpareil, Holiday's, and Jackson's. These claims have all been prospected, and show richly. Hall Brothers have paid over one hundred dollars royalty in the spring, and a very much larger sum must be paid when they go to Halifax, and all is cleaned up. Many fine sights can be obtained from boulders on the surface. So rich are these boulders that one can make wages breaking them up.

WHILE Mr. Vanderbilt was in Amsterdam recently he purchased, one afternoon, thirteen thousand dollars' worth of blue ware for his new residence in New York.

War—Supporting the Guns.

(From the Detroit Free Press.)

Did you ever see a battery take position ?

It hasn't the thrill of a cavalry charge, nor the grimness of a line of bayonets moving slowly and determinedly on ; but there is a peculiar excitement about it that makes old veterans rise in their saddles and cheer.

We have been fighting at the edge of the woods. Every cartridge box has been emptied once and more, and one-fourth of the brigade has melted away in dead and wounded and missing. Not a cheer is heard in the whole brigade. We know that we are being driven foot by foot, and that when we break back once more the line will go to pieces and the enemy will pour through the gap.

Here comes help !

Down the crowded highway gallops a battery, withdrawn from some other position to save ours. The field fence is scattered while you could count thirty, and the guns rush for the hill behind us. Six horses to a piece—three riders to each gun. Over dry ditches where a farmer would not drive a waggon, through clumps of bushes, over logs a foot thick, every horse on the gallop, every rider lashing his team and yelling—the sight behind us makes us forget the foe in front. The guns jump two feet high as the heavy wheels strike rock or log, but not a horse slackens his pace, not a cannoneer loses his seat. Six guns, six caissons, sixty horses, eighty men, race for the brow of the hill as if he who reached it first would be knighted.

A moment ago the battery was a confused mob. We look again, and the six guns are in position, the detached horses hurrying away, the ammunition chests open, and along our line runs the command, "Give them one more volley, and fall back to support the guns." We have scarcely obeyed, when boom ! boom ! opens the battery, and jets of fire jump down and scorch the green trees under which we fought and despaired.

The shattered old brigade has a chance to breathe for the first time in three hours as we form a line and lie down. What grim, cool fellows those cannoneers are ! Every man is a perfect machine. Bullets splash dust into their faces, but they do not wince. Bullets sing over and around, they do not dodge. There goes one to the earth, shot through the head as he sponged his gun, That machinery loses just one beat, misses just one cog in the wheel, and then works away again as before.

Every gun is using short-fuse shell. The ground shakes and trembles, the roar shuts out all sounds from a battle line three miles long, and the shells go shrieking into the swamp to cut trees short off, to mow great gaps in the bushes, to hunt out and shatter and mangle men until their corpses cannot be recognized as human. You would think a tornado was howling through the forest, followed by billows of fire, and yet men live through it—aye, press forward to capture the battery. We can hear their shouts as they form for the rush.

Now the shells are changed for grape and canister, and the guns are fired so fast that all reports blend into one mighty roar. The shriek of a shell is the wickedest sound in war, but nothing makes the flesh crawl like the demoniac singing, purring, whistling grapeshot, and the serpent-like hiss of canister. Men's legs and heads are torn from bodies, and bodies cut in two. A round shot or shell takes two men out of the rank as it crashes through. Grape and canister mow a swath and pile the dead on top of each other.

Through the smoke we see a swarm of men. It is not a battle line, but a mob of men desperate enough to bathe their bayonets in the flame of the guns. The guns leap from the ground, almost, as they are depressed on the foe, and shrieks and screams and shouts blend into one awful and steady cry. Twenty men out on the battery are down, and the firing is interrupted. The foe accept it as a sign of wavering and come rushing on. They are not ten feet away when the guns give them a last shot. That discharge picks living men off their feet and throws them into a swamp, a blackened, bloody mass.

Historians write of the glory of war. Burial parties saw murder where historians saw glory.

THE London *Telegraph* says that in consequence of the advance in value of many securities held by the Glasgow Bank, the liquidation is likely to show much better results than were at one time anticipated, and those shareholders who have met their calls in full will be handsomely remunerated.

MR. WILLIAM B. ASTOR lately paid one hundred and ninety thousand dollars for the beautiful Parish estate in Newport.

Sentiment in the Sex.

"Women is the weaker vessel." This is an adage which has been ratified by almost universal acceptance and been practically acted upon in all ages and all countries. Paul, when he wrote it, not only gave utterance to an inspired thought but also to a principle that seemed taught and enforced by the very nature of things and the design of the Creator. There have been, however, many of the sex who have loudly protested against the statement and denounced Paul as next door to a misogynist, and an ungallant and ungenerous detractor of womankind, and the question is now more than at any former time the basis of agitation and outcry among the most civilized nations. What then is the true inwardness of the case? Is woman really to hold a divided sway with the so-called Lords of Creation? And if not, why not?

We confess to having a wholesome dread of offending our fair readers if we state fully our convictions on this matter. We shall be stigmatized doubtless by girls of the Boston type as "a horrid creachur, utterly devoid of culchur," and from the very mildest and gentlest of our lady friends we expect at least a remonstrance; but, all the same, truth—or, at least, our convictions on his matter, compel us unhesitatingly to say "woman is not the equal of man nor intended to share his sphere of work, still less to rule with him a "divided empire."

We do not propose to repeat the stale arguments that have been so often used in support of this position, but simply to show that there is one special characteristic of the female mind which conclusively, and once for all, decides the question against the so-called "rights of women;" and this peculiarity is the sentimentality of the sex.

A woman is utterly under the domination of this feeling from her earliest years. She takes naturally to dandling and nursing her doll, as soon as she can walk, and her sentimental fancy endows it with all the characteristics, the wants and habits of a real living child. She pours out the wealth of her childish affection upon it, and in this way indicates with irrestistible truth the true sphere for which God intended woman. Nor is her sentimentality less vividly seen in her riper years. The doll may be thrown aside indeed (though, ten to one, it is carefully treasured in some secret repository to be looked at with tender memories now and again), but she soon finds other treasures to be fondled and prized in its stead. We wonder whether there is a single lady, of our or any other person's acquaintance, that has not treasured up in some carefully concealed *cache*, some lock of hair, some package of letters, some copy of verses that are the merest rubbish in themselves but which are nevertheless in her eyes more precious than silver or gold. The stronger nature of man laughs at the idea of such sentimentality but in woman it asserts itself as an essential element in her nature, and refuses to be expelled either by reason or ridicule. In short, the heart of woman is more susceptible, and therefore her nature is to that extent weaker than that of man, thus indicating her being fitted for another sphere. At the same time we do not call that sphere a *lower* one. On the contrary it is one of great—if not the greatest power and influence in shaping men's characters and ultimately, the history of nations. It would be an interesting matter of research and historical value to reckon up and recount the amount of influence that has been exerted on the world's, great changes and events by those women who did not exert that influence beyond their legitimate sphere, whose sons owed the high and noble qualities by which they won their way to success to the careful instruction and wise training of their mothers, whose husbands had to own that more than half their success in life was due to the wise counsel and cheering influence of their wives.

But for the rougner, harder work of life it absolutely unfits them. It is but too apt to warp judgment and set reason to one side. In the political arena it is a most undesirable factor, and in other departments of man's work (such as law for instance) it is something most likely to interfere with justice for the sake of mercy, and to render "the hand that should strike unable to do more than stroke."

And to this, if it be answered that there have been women who have shown the most eminent qualifications for success in the work usually done by man, let us reply that those who did so must have either got rid of their sentimentality, or else been born without it. In either case they are not the sort of women we should care to have around us.

This sentimentality, then, though it be regarded as a sign of weakness by some, we call a sign of strength, the truest strength with which a woman can be endowed to enable her to fulfil worthily her noble mission, a mission which, be it noted, man could never fully discharge. The care of the home circle, the training and care of the young, are eminently the work of woman, and this need not, indeed should not, exclude the cultivation of intellectual pleasures. She need not be a mere drudge—indeed she must not be if she be desirous of being a real help-meet to her husband—and, in the well-regulated exercise of true sentiment, she will find at the same time her purest pleasures and her best safeguard.

Hunting for Submarine Treasure.

A schooner, owned by a Conneticut "Submarine Company," is being used in exploring a sunken wreck off Round Island, near Peekskill, on the Hudson. The wreck has been there many years, and is reputed to have been the ship of the famous pirate Capt. Kidd. A visitor found among the appliances of the schooner a great variety of machines, chains, pumps, rubber tubes, and other contrivances, for bringing treasure out of deep water. Chief among these was a large diving bell, of boiler iron, with little round windows on every side, so that the man inside can see out in every direction—up, down, and across. It is kept in a well in the hold, and when it is to be used, bolts at the top are unfastened, the top being put on so tight that the affair is both air and water proof. The sensation of being bolted into this narrow iron prison for the first time is said to be terrfble, though the experienced divers do not mind it. There are two rubber tubes attached to the top, one to carry off the exhausted air, the other to supply fresh air. When the man is fastened in, the pump is started, and the bell is hoisted out with an immense derrick and lowered over the side. This bell can operate in three hundred feet of water, and is, of course, raised or lowered by steam. When all is ready it is lowered to the bottom. The man inside looks through his windows, and determines what must be done first. He has wires to pull to signal the men above. He can tell them to hoist, lower, give him more or less air, or any other signals that may have been agreed upon. Attached to the side of the diving bell, and operated by steam, from above, is what is called "the arm"—a heavy attachment, provided with so many joints and swivels that it is capable of making all the many motions of the human arm, with much greater strength than any human arm ever had. This arm has a hand, with fingers, that hold a saw, an axe, a crowbar, or any instrument desired. If the man in the bell desires to saw, he is drawn up, a saw is put in the steam hand, and he goes back and begins work. When he wants an axe or a hammer he is drawn up again, and the tool is changed. The iron bell is almost human in its capacity for work, and, with the brains of a man inside, it is a valuable labourer. When the work is in very deep or dark water, or at night, an electric light is attached to the bell, and the bottom for many yards around is made as bright as if the sun shone upon it. The effect upon the surface of the water of this bright light underneath is said to be dazzling and beautiful, and some of the Rip Van Winklites who live up yonder on the hills may well begin to wonder when they see the bottom of the Hudson bright with electric light and a steam man digging for a pirate's treasures.

It is said of Darmstadt that it is the healthiest spot on the globe. Nearly all the inhabitants die of old age, or when they get tired of life move to Munich, where they are sure to drop off in a very short time. "But it is all a mistake," said a poor and tearful peasant to his doctor: "Darmstadt has not a healthy climate, for I had a cousin who resided there, and he suddenly took sick and died." "And what was his disease, my friend?" asked the astonished doctor, looking over his gold bowed spectacles. The peasant thought he proved his assertion that the climate was unhealthy by replying. "Why, he died of delirium tremens."

It occasionally happens that a man tells the truth when his real object is to tell a lie. An Italian, unfamiliar with the English language, used to sell fish on the streets, using the usual call—"Freshee fishee, all alive!" After a while he retired from the fish business and took to selling eggs, using however, the words—"Freshi eggs, all alive," densely unconscious that he is not telling the lie he thinks he is.

Fiendish Fury.

HORRIBLE BUTCHERY OF A VIRGINIA WOMAN BY HER BROTHER IN-LAW—THE WRETCH'S ATTEMPT TO TAKE HIS OWN LIFE ABLY SECONDED BY HIS WIFE.

At Richmond, Va., intelligence has been received here of one of the most desperate and bloody crimes known in the history of murders, and one which shows how strongly hatred animates a human being even in the hour of death. The tragedy took place yesterday, near the village of Green Springs, in London county. It seems that Merrill Nott yesterday morning early had a quarrel with his wife's sister, who lived in the house with him. Thoroughly infuriated, he went out and got a large knife used for cutting corn, and, coming back, assaulted her with the murderous weapon. He pursued the unfortunate woman into the yard and stabbed and hacked her until he thought she was dead. After this he went into the house, and, taking his gun, discharged it into the air. He then reloaded the weapon, and, proceeding to within a few feet of where his victim lay weltering in blood, placed the muzzle of the gun under his own chin and fired, the load passing through his mouth, tearing of the tongue and lodging in the upper part of the jaw. He fell in his own gore, and while struggling on the ground gasping for breath he noticed signs of returnturning life in his dying sister-in-law. Summoning the full strength of every muscle and concentrating the whole of his vital forces in one almost superhuman effort, and even then struggling in the throes of dissolution, he crawled about on the ground until he reached a large stone, which he caught in his clammy hands, and then, wriggling his distorted body over the ground with almost worm-like motion, he dragged it to the side of the dying woman, and, lifting himself, he raised the stone as high as he could and let it fall on the woman's face. It crushed in the skull and nose of the woman, but she still struggled. The dying scoundrel, with a determination which did not leave him in his last moments, reached out again for the rock, with the design of dealing another blow. At this stage of the tragedy his wife appeared in the yard, and, seeing him reaching for the stone, seized another, and, standing over his body, dealt him a death blow, but too late to save her sister, who died in a few minutes after her murderer. It is not known what caused the quarrel between Nott and his sister in-law, but it is understood that he and his wife had also been quarreling, and that his sister-in law simply took his wife's part.

At the Mercy of the Waves.

MEN LEFT IN MID-OCEAN CLINGING TO A SINKING SHIP'S MASTS—THE FRUITLESS ATTEMPT OF THE CALIFORNIA'S MEN TO RESCUE THEM—DISAPPEARING IN THE NIGHT—A POSSIBILITY THAT THEY HAVE BEEN SAVED.

The three hundred sixty-five cabin and steerage passengers which arrived in New York yesterday on the Anchor line steamship California saw a thrilling spectacle in mid-ocean. When four days out from London a bark was seen in an apparently sinking condition. The sea was boisterous, and the crew, clinging to her shrouds, waved their hands in appeal for help.

Capt. Donaldson of the California brought his ship up into the wind.

"Hardie," he said, calling to the first officer, "lower the big cutter and try and get to her."

Hardie, a veteran mariner, lost no time in clearing away his boat, which, manned by a hardy crew, was soon in the huge seas that had been generated by a fierce northeaster.

Officer Hardie says that, with great exertion, he succeeded in getting to leeward of the bark, which was tossing about helplessly in the trough of the sea. After many attempts his crew got the end of the line which had been made fast to a broken spar and thrown overboard by the bark's crew. His boat was pitched up and down on the seas as though it had been in the surf, and before he could approach nearer the line parted. Many of the crew in the rigging seemed to have their dunnage strapped in the rigging, and they did not respond to his appeals to them to jump overboard. By their signalling he learned that the bark was the Macedonia, from Pensacola, Fla., for Berwick, England. She had ten feet of water in her hold, and was leaking badly. The day was waning, and a thick haze was setting in. So much difficulty had Hardie and his crew experienced in reaching the sinking bark, and such a tax upon the strength of his crew had it proved to keep their boat head to the sea, that he finally decided it would be fatal to all hands to remain longer away from the steamship, which was fast becoming indistinct. Before returning, however, he made a final effort to get the men in the shrouds to jump overboard. This they seemed loth to do. Their ship was lunging about in the seaway, the waves making a clear breach over her. It would have been fatal, he says, to have approached her. Had he touched her rearing sides his boat would have been crushed. This was the reason, he says, that he was finally compelled to sheer off and make for the steamship. His men were so exhausted when they reached their ship that they had to be lifted aboard by a fall and tackle.

Capt. Donaldson decided to stay as close as possible to the sinking ship and make another attempt at rescue in the morning. When darkness set in a white signal light was seen on the bark, and a red light was shown aboard the steamship in response. The gale continued all night, and in the morning the sinking bark was not in sight. After describing a great circle with lookouts in the tops, without seeing anything of the bark, the California proceeded on her way hither.

The officers of the California are of the opinion that the bark was settling very slowly into the sea. They say she was, when last seen, dissectly in the track of passing vessels, and they think the crew may have been rescued. The bark was last seen in latitude 48° 47′ north, longitude 21° 57′ west.

The bark Macedonia was commanded by Capt. Parker. She was built at Bath, Me., in 1845. She was 125 feet in length, 27 feet beam, 19 feet depth of hold, and of 476 tons register; Her owner is M. Thompson, of Newcastle, England.

How to Have Ice Next Summer.

A great many people do without ice in the summer—though the ponds and streams at their doors furnish an abundant supply every winter—simply because they imagine that an expensive icehouse is needed to hold the ice. A gentleman who once laboured under the same delusion, describes in the *Tribune* the experience by which he was led to store his summer supply of ice successfully, without an ice house, after paying dearly in disappointment, loss of ice, and loss of money, through having "too much icehouse." He was convinced of his error by the circumstance that the more pains he took with his icehouse the more rapidly his ice melted, while a neighbour who had no icehouse at all always had plenty of ice. The practice of the latter was simply to pile his ice in a square body under a cow-shed having a northern exposure, the first layer of ice being raised above the ground so as to secure good drainage, and the whole covered thickly with sawdust. Boards set on end around the ice pile served to keep the sawdust in place. The gentleman referred to says:

A pile of ice six feet high, and eight feet long will make three hundred and eighty-four cubic feet. And this is enough for the use of an ordinary family for the table and to cool the cream etc. Six team loads fill an icehouse which contains about four hundred cubic feet. The blocks should be cut as smooth as possible and square, so they will fit closely, and then ice must be chopped up fine and crowded in between the pieces so as to make a solid mass. The closer the ice is packed, and the more solid the mass is united together, the better it will keep. When an icehouse is too close, there is a great deal of condensation, which makes the whole contents wet and dripping, and causes the ice to melt rapidly. The air must be kept as dry as possible, one secret of keeping ice being plenty of ventilation. The more ice there is in a pile the better it will keep. A small quantity must be covered deeper and thicker than a large mass. A large mass will almost keep itself. It does not require the protection of sawdust, but straw or a double wall of boards will be ample. Every person who makes butter ought to have ice. It will more than pay for use in the dairy, and then for the family it is a luxury every provident man should supply.

Dr. Graham of Louisville, in his 97th year, has gone on his regular annual hunt in the mountains. He says that every autumn since 1830 he has eaten venison of his own killing and cooking.

The Gatineau.

We continue the description of the mills on the Gatineau River. The principal are the Gatineau Mills, belonging to Messrs. Gilmour & Co., situated at the village of Chelsea, about eight miles from the city of Ottawa and nine miles from the junction of the Gatineau with the Ottawa river. The scenery above and below the mills is exceedingly romantic and beautiful—four or five rapids and cascades, and sloping banks to the water's edge, covered with trees and foliage, render this portion of the river most picturesque and charming. The mills are situated on the south bank of the Gatineau, above the high falls, and are surrounded by a series of booms and works of great magnitude upon which immense sums have been expended. The whole of the saw-logs which descend the Gatineau are caught in these booms, and a very faint idea can be conveyed to a stranger of the immense amount of skill required to separate those belonging to the Gatineau mills from those belonging to different manufacturers below.

During the summer this point of the river presents a scene of bustle and animation of the most extraordinary kind, and as the firm employs literally an army of workmen, the scene can be better imagined than described.

Below the booms, the worst point of the river has to be encountered by the logs descending the stream, and it is frequently enlivened by the appearance of perfect islands of stranded timber, technically called *jams*, and the efforts of the owners to set them afloat exhibit scenes of daring and endurance seldom witnessed elsewhere.

The mills were commenced about forty years ago. They now consist of two large, substantial buildings, and a smaller mill for preparing lumber for the United States market. The water power used is equal to about five hundred horse power. There are 13 saw gates containing about 220 saws; and twenty edging, buttoning, and re-sawing circular saws. These mills will manufacture 230,000 feet, board measure, in eleven hours, or about 35 million of feet per season. About two thirds of this lumber is cut for the Quebec market, and the balance for the United States. Attached to the mills there are about three miles of wooden canal for conveying the sawn lumber to the piling grounds. Messrs. Gilmour & Co. possess timber limits to the extent of 1,700 square miles, whence they obtain the requisite number of saw-logs to supply these extensive works. and 1,000 men receive employment from them during winter and 500 in summer, including lumbermen, farmers. surveyors, &c., &c. They also employ 250 spans of horses; and during each season they consume 40,000 bushels of oats, 600 tons of hay, 1,500 barrels of pork, and 3,000 barrels of flour, besides large quantities of clothing, boots, shoes, tea, tobacco, blankets, &c., &c., &c. These mills are amongst the most celebrated in the country, not only for the romantic beauty of the surrounding scenery but for the perfection of the machinery employed and the order and good management exhibited throughout them.

On their limits this firm has nine farms, comprising in all about 1,500 acres. The whole of the produce of these farms is consumed by the employees of the firm. On the banks of the river Gatineau they have four principal depots, from which supplies are sent to lumbermen at work in the woods. One of these is distant upwards of 200 miles from Ottawa. This firm pays from $275,000 to $300,000 in wages annually.

Pickanock Village.

This village is situated in a valley at the mouth of the Pickanock river, distant from Ottawa sixty miles. It is one of the many romantic spots on the Gatineau. The founder of the village, Mr. J. Ellard, is proprietor of the grist mill and saw mills, which were built by him in 1862. The country around Pickanock abounds in minerals, such as phosphate, iron, lead, &c., with indications of gold and silver.

—Coal in Winnipeg is quoted at $18.50 to $19 per ton.

—It is semi-officially announced that the Ontario Legislature will meet on the 13th January.

The Victoria Farm.

About a mile above Pickanock village is Victoria Farm, the principal depot of Messrs. G. B. Hall & Co., whose mills are at Montmorenci, near Quebec. The farm, according to a correspondent, comprises 700 acres, 400 of which are under the most perfect cultivation, under the charge of Mr. R. Bowden, who also looks after the stock, which is unsurpassed on the Gatineau, and comprises 35 horses, 26 head of cattle, 55 sheep, 16 pigs, &c.; among these fine animals, is a magnificent bull, which though only 3 years old, weighs 2,030 lbs., and a handsome stud. The farm is also provided with a large vegetable garden, in which are to be seen grapes and other fruits and a variety of flowers. The products of this farm last year amounted to over 200 tons of hay, 5,000 bushels oats, 6,000 bushels turnips and 3,000 of potatoes. The buildings are perfect and all the most improved agricultural implements, are in use; 12 labourers are employed who reside on the farm. Attached is a general store, and the offices which are connected with Ottawa by wire; 3 clerks are engaged attending to the directions of Mr. Fisher, the general agent and the foreman of the other farms, or depots, which are five in number, and are situated at various points north on the tributaries of the Gatineau. From six to seven hundred men are employed directly and indirectly by this large lumbering house.

The Desert.

This village, so called from the River Desert emptying, in to the Gatineau, where it is built, is also called Maniwaki. It comprises a mixed population of nine hundred inhabitants, viz: about 500 English and French speaking, and 400 Indians. It is situated ninety miles north of Ottawa city. In the neighbourhood are four depots belonging to Messrs. Gilmour & Co., G. B. Hall & Co., Hamilton Bros., and Mr. Chas. Logue.

Hawkesbury Mills.

This extensive establishment owned by Messrs. Hamilton Bros., has been established for over three quarters of a century. The first firm was Hamilton & Low, who commenced work cutting logs on the Gatineau in 1805. They first began about 20 miles up the river, they have year by year pushed their business northward until they now operate 110 miles above the Desert—own 920 square miles of limits in the Gatineau district and have five large depots connected therewith 30 miles apart. The number of men employed there varies in the aggregate from 150 to 300; this is but a small portion of the business of the tributaries of the Ottawa, among which we may mention the *Rouge*, Desert, *Gatineau*, Jean-Deterre, Ignace, Crow and DuMoine Rivers; in the latter district they own 850 square miles of limits and employ 400 men, and on the Rouge over 100. The total number of men employed in the woods to get out saw logs —the only timber made for the firm's mills—which are situated at Hawkesbury, will average about from 600 to 1,000 annually.

The Mills are situated about sixty miles from Ottawa city, on the south shore of the river, near the head of the Grenville Rapids. They contain 101 vertical saws and 44 circular saws, driven by 72 water-wheels, and turn out from 35,000,000 to 42,000,000 feet of lumber per annum. About five hundred men and boys are in summer employed constantly by the firm at Hawkesbury alone. Some conception of the immense extent of the operations of this firm may be formed when we say that more than 3,000 tons of agricultural produce are consumed annually.

The establishment includes four saw-mills, together with a grist-mill, with four runs of stone, for the production of flour for the use of the raftsmen, shantymen and other employees, as well as for the neighbouring farmers.

The present firm is composed of Hon. John Hamilton, Robert Hamilton, and John Hamilton, Jr. The chief business office is at Ottawa, under charge of Mr. Hiram Robinson.

MINING NEWS.

The Brockville *Recorder* says, a mineral spring has been discovered near Morristown.

An offer by an American gentleman of $3.75 per ton for 40,000 tons of iron ore delivered in Ottawa has been refused by Col. Robbins.

Moore & Cutler's timber limits on the Mattawa, 133 square miles, were sold recently at Ottawa, by J. Brewer, auctioneer, to J. R. Booth, for $30,100.

A party of miners returning from the interior of Alaska and the head waters of the Yukon river, report finding numerous gold deposits and indications of rich placers.

The Renfrew *Mercury* says: Two men are hunting up minerals in the mountain ranges of Litchfield. One of them carries the bag and specimens. Among the specimens is a beautiful piece of marble got in the neighbourhood of Renfrew. Equally as good can be found in large quantities on this side of the river.

THE PRICE OF PHOSPHATE.—The price of phosphate on the canal is now about $12 a ton, and the demand, we are informed, is more than equal to the supply. This is a good paying figure, and the output should be large this season.—*R. Mercury.*

The discovery of a gold nugget weighing six ounces is reported from the Delery concession, River Gilbert. Mr. Delery has formed a new company to work the precious metal under the name of the East Branch Gold Mining Company.

During the past year over one thousand immigrants have been registered at Ottawa, all of whom have obtained work in the Ottawa valley. Since the 1st of January 120 settlers, with effects valued at $10,513, have moved into Ottawa. For the previous year the value was $5,878.

A citizen of Ottawa has gone to New York with samples of sand found up the Ottawa, and supposed to contain a very large percentage of gold. The object of his visit is said to be to negotiate for either the sale of the property on which the sample was found, or to organize a company for its development.

A French paper says, that Mr. J. Ainsworth, proprietor of lot No. 13, Concession DeLery, in Beauce, has realized something like $200 a day for some time past. He employs constantly some 35 men. A day or two ago one of the workmen on this lot found a nugget valued at eighty dollars.

The gold mining property owned by the estate of the late Alexander Heatherington, and situated at Cariboo, East Halifax, was sold by the sheriff recently and purchased by S. R. Jenkins for $4,000. The property includes sixty-seven gold mining areas, one hundred acres of land, and buildings and machinery.

The following interesting news comes from Ottawa:—

Hon. R. W. Scott and Mr. W. H. Walker, Ottawa, have been in New York city for some time past negotiating for the sale of the Canada Plumbago Company's mines and works near this city, on the Quebec side of the river. After many false alarms, success appears ultimately to have attended their mission. Mr. Walker, who has returned from New York, states that a new company with $300,000 capital has been formed in New York to manufacture a new economic material of which plumbago is the principal ingredient—in fact to the extent of 76 per cent. Patents have been obtained for it in the principal civilized countries. The company consists of prominent financial men, and the paid-up capital amounts to $93,000. At a meeting of this company held in Cooper's Institute, the terms of the sale of the mines were agreed upon, subject to the Treasurer's approval, who was then in France negotating the sale of the patent for the new material. He expects to realize $300,000 for patent. The terms of the sale appear to be that Mr. Walker retains one-half interest, while the American company takes the other half. The company are to take the plumbago at ruling market prices. About $800 per ton will be paid for the refined plumbago. Fifty men will be employed on the works at Buckingham, and will work in night and day gangs. The new material appears to be lubricating in its character, as it does away with the use of oil on machinery. As to the other proprieties secrecy is maintained at present.

From Oxford County, township of Blenheim, Ontario, a Drumbo correspondent of the Paris *Star* writes that a large bed of iron ore has been uncovered on the farm of John Burgess, within a quarter of a mile of the village. There is only about a foot of soil covering it. The soil was taken off by shovels, uncovering quite a large spot, and the ore lies there in a bed and seems to run downwards from the point and over to Henry Muma's farm. There had been some persons acquainted with the fact for some time, but only now and then picked up small specimens; but now the actual bed has been found, it will not be any trouble to trace the vein. A gentleman who examined it says it very much resembles the ore taken from the Londonderry mines in Nova Scotia. Here is a chance for capitalists to take hold of, as it is within a quarter of a mile of the Grand Trunk and Credit Valley railway stations, and there are excellent advantages for shipping.

600,000 Barrels of Petroleum Wasted.

Since midsummer there has run to waste in the Bradford oil region something like 600,000 barrels of petroleum. A recent dispatch from that region says that there are in round numbers nearly 8,000 oil producing wells in the Bradford district. Their daily yield is 70,000 barrels. The lower or old oil fields are producing 12,000 barrels a day. The daily demand for petroleum is 55,000 barrels. This is the amount now run by the pipe lines. The accumulation of oil for which there is no present demand long ago exhausted the storage capacity. For three months 6,000 barrels of oil have been running to waste every day. There are 2,000,000 barrels of petroleum in wooden tanks at the wells. It is estimated that there are at least 8,000,000 barrels of accumulated stocks in the storage tanks of the pipe lines. The oil that is running to waste is run upon the ground and into creeks. Enterprising individuals build dams along these streams and collect the floating "grease." Hundreds of barrels are pumped off and stored in improvised tanks to await a market. Individual producers are building private tanks to store the overproduction. There are now 400,000 barrels of this tankage in this region. The number of wells steadily increase every month, in spite of the situation.

The Bradford wells are all flowing wells. This fact is what caused the abandoning of so many of the wells in the lower field, they being all pumpers. Until recently the "sucker rod" and pumping engine were almost unknown in the Bradford field. Now they are in demand. Many of the old wells have fallen off greatly in their yield. The supply companies cannot furnish enough sucker rods and engines to meet the call for them. Second-hand ones from the lower field find a ready market at good prices. This resort to the pump is creating no little uneasiness in the field. It indicates that the gas is failing. A flowing well on being pumped increases its yield largely; but the continuance of a full yield becomes uncertain. The positively defined area of the Bradford oil producing field includes over 65,000 acres. There is a well to every 5 acres of land that has been developed, which leaves about 30,000 acres yet to drill. Wells on this territory will not be put down with such reckless haste as has characterized past operations, because it is controlled by large companies of capitalists.

THAT exquisite monument of ancient Irish art, the Tara brooch, more delicate than the finest Etruscan work, was sold by the finder to a Drogheda goldsmith for $1.25.

THE London journals continue their commendations of the improved arrangement recently devised for starting cars and assisting the driver to brake up. This plan, which differs from others brought forward for a similar purpose, consists of a system of coiled springs, levers and gearing, placed at the end of each car under the framing, the springs being connected by means of a cross-head and chain, with a loose drum and clutch gearing working on the axle on which the car wheels are fixed. When the signal is given to the driver to stop the car, he releases a lever, which throws a fixed clutch into gearing with the loose drum, to which the chain is attached; the drum then revolves with the axle of the car and winds up the chain, thus causing a retarding force to be exerted on the wheels by reason of the springs being compressed. On receiving the signal to go on the driver releases the clutch from the drum, and the springs, having thus free play, unwind the chain from off the drum; in so doing, the drum, and with it the axle of the car, is revolved in a forward direction, which gives an impetus to the cars.

Armed Peace in Europe.

Plots and Counterplots of the Powers —Greece Preparing to Claim her Provinces—Germany Desirous of more Allies—The Fortifications of Paris—The Russian and Chinese Armies.

PARIS, Nov. 12.—Those who are behind the curtain assert that February will not pass without bloodshed on an extensive scale in Epirus and Thessaly. There was every reason to anticipate this bloodshed six months ago, and yet there was none, because diplomacy hoped to frighten the Sultan by threats which diplomats assured him privately should not be executed, and I would be inclined to think that nothing more serious need be feared for 1881 if it were not for two circumstances: First—The Greeks have managed to raise a loan of sixty millions, which they are spending entirely upon the armament and mobilization of their national forces. Second—Although the Sublime Porte pays none of its creditors either at home or abroad,

"THE PALACE FLOATS IN GOLD,"

to quote literally the expression of an Oriental banker to me last evening. That this money should have been furnished to the Greek and Turkish Governments, both notoriously insolvent, is a symptom of trouble ahead, and, if my information be correct, the subsidies can be traced to Berlin on the one hand and to London and St. Petersburg on the other. The catastrophe is certain; when it will come depends entirely upon the good pleasure of Prince von Bismark, which in its turn depends upon the success of his present intrigues to draw France into the Austro-German orbit. Monstrous as this alliance would be, it is not at all an impossible eventuality. Just now such a compact would overthrow any Government by which it might be proposed, but the mere circumstance that some very respectable men have begun to discuss its possibility, to estimate the nature and extent of the *quid pro quo* to be demanded, is evidence of a wish to feel the public pulse. That the maintenance of quasi-cordial relations between

RUSSIA AND GERMANY

depends entirely upon the existence of their sovereigns is generally admitted, and the news concerning the Czar's health is of a nature to cause legitimate apprehensions. The official reports, of course, represent it to be blooming, but private letters speak quite in another way, and it is certain that the most eminent physicians of St. Petersburg were telegraphed for last week to consult with his majesty's ordinary medical attendants at Livadia. The report is that dynamite and revolvers having proved of no avail, arsenic has now been resorted to, the utmost secrecy is prescribed to the press, but the correspondents of foreign journals tell queer stories of perquisitions made in the imperial kitchens and of the arrests of several of the imperial cooks. Something of the sort must have been the cause of the precipitation with which the morganatic marriage with

PRINCESSS DOLGOROUKI

was celebrated. I have already noticed this affair, and, I think, stated how there was even question, at one moment, of having a right-handed instead of a left handed ceremony, for which there was a precedent in the case of Peter the Great. Mme. Dolgorouki had quite enough influence over her august lover to obtain this had she elected to wait awhile, but, being a clever woman, she appreciated that delays may be dangerous, and so preferred the lesser honor by which her children are legitimated and her own very equivocal position as favorite rendered respectable. Although I wrote about this marriage more than a month ago, the French newspapers have only just published it as a fact, and have only just begun to make their commentaries, while but three days ago did even the Cologne *Gazette* obtain full details. The ceremony was performed on the 1st of last August in a chapel of the Palace, in the presence of a very few witnesses, among whom where the Grand Duke Nicholas, who will now, as a reward for his condescension, be probably restored to favor, and the Minister of War, Gen. Miljutine. All the imperial family except Nicholas testified their disapproval by their absence. The Czarewitch went away to Hapsal, the Grand Dukes Constantine and Vladimir came to Paris, the latter accompanied by the Grand Duchess, the former with the mission to bring home the yacht Livadia.

Now, being posted better than even the Russians themselves on these

IMPERIAL FAMILY JARS,

knowing the intense hatred of the Russian Crown Prince for everything German, whether on the right or the left bank of Vistula, and feeling that the precarious state of the Emperor's health offers little assurance of any long duration to the *Statu quo*, Prince von Bismarck casts about him for another alliance. He has no great confidence in the value of the Austrian Army, and he is very much afraid of the French Army, which, if very deficient in many respects, has immensely improved in quality since 1871. He does not propose any compensation as the price of a French alliance, he has no intention ever to propose any compromise, but follows up his old game which was so successful with that imbecile, Napoleon III., in 1866. Meanwhile, he hints to the German people that the French clamor for reprisals is understood—this in order to make a war with France, if needs be, popular in Father land—and he lets the French know that he is in possession of all the details of their offensive resources.

An article, published some months ago, anonymously, and which I then translated told the French and the Germans what both might expect in the matter of field operations. An article in a recent number of the *Berliner Tagblatt* shows the opinion of German strategists concerning those fortifications which our people fondly hoped would render Paris impregnable. The fortified *enceinte* embraces an extent of about 116 square miles; this is judged to be too great to allow reciprocal support between the detached forts, and to organize a solid defence of the intermediate ground where there must be necessarily a great many sectors without fire, through which attacking columns may penetrate and take the positions in rear.

THESE VULNERABLE POINTS

have an average breadth of about five miles, and being in covered ground, they are especially favourable to the assailant. Such, for example, is the ground between the railway lines of Lille and the Soissons, and on the south, between Paloiseau and Villeneuve. As to the guarantees offered by the new works against the investment of the capital, I must agree with the *Tagblatt* that they are totally insufficient. The last siege proved that to isolate the capital entirely was impossible; by means of carrier pigeons and balloons communication could always be kept up with the Provinces, but the alimentation of the town is no easier now with the new system than it was in 1870-71. A zone of 116 miles can only be provisioned by means of railways, and the first operation of an enemy must naturally be the destruction of this means of communication. In 1870-71 neither the French nor the German Armies, with very rare exceptions, destroyed either the tunnels or the viaducts; in the next war both will act differently, and if, from time to time, a few wagon-loads of flour and a few droves of oxen can be introduced, neither will be in sufficient quantities to relieve the wants of the garrison and the population of the beleaugered city. Besides these objections, on which the German newspaper lays great stress, there is another, equally important, but of which, strangely enough, it makes no mention; the great development of the line of defense will subtract a considerable proportion from the troops, which otherwise might be employed in offensive operations. I do not believe that

ANOTHER SIEGE OF PARIS

is probable in our time, but if it should come off, and France rely for her salvation upon the assistance of her capital, the finale will be the same as nine years ago. The only difference will be a prolongation of her agony. Not that I believe France to be foredoomed to defeat in her next struggle with Germany. The French Army is second to none in the military education of its rank and file. Up to the grade of General of Division its officers are excellent; but I cannot see where the country is to look for a chief capable of of directing the *ensemble* of operations. The manœuvres have formed the soldiers, but the absence of all initiation from the operations of brigade and division commanders which is enforced by the programmes of these manœuvres leaves everything, as it used to be, in the hands of the Commander-in-Chief, who may be another Bonaparte, but who may be a fool. Red tape is the curse of the French Army just as much now as it was ten years ago, and if red tape, routine, and tradition be not demolished when this Army next takes the field, the results will be as disastrous as they were when it was last called upon. If they be swept away, the capture of Berlin and not the capture of Paris will be the crowning glory of the war. Which of the two courses may be followed no living man can foretell.

Meanwhile

RUSSIA IS ARMED QUIETLY,

and although her pretended object is the subjection of the Turcomans and the defense of her Kuldja frontier against the Chinese, it is not possible to admit that either of these enemies can cause her any grave anxiety. The late Russo-Turkish war was an admirable school for her officers; they made grievous mistakes there, but they learned some very wholesome lessons, and when we look at the development of her Army during the last quarter of a century, we must admit that those who affect to despise her military strength are woefully blind. On the 1st of January, 1853, the Russian Army was composed of 27,716 officers, 968,382 men inclusive of the reserve, the Militia, and the auxiliary troops, and 78,144 Cossacks. During the Crimean war these forces were considerably increased, and according to official data, amounted, on the 1st of January, 1856, to 41,817 officers and 2,275,454 rank and file. This strength was, however, only nominal; on paper, the effective was: Active Army, 24,654 officers and 1,170,184 soldiers; reserve, 7,876 officers and 572,158 soldiers; irregular troops 3,640 officers and 168 691 soldiers; Militia, 5,647 officers and 364,421 soldiers; Cossacks, 3,441 officers and 156,726 soldiers; for service, subtraction must be made of about one-half of these figures, as in 1863, for example, according to the Ministerial report, the Russian Army only counted 858,997 regular troops, and a conscientious examination of the muster rolls a few months later showed that the genuine effective of the Army did not exceed the approximate figure of 385,000. Since then, however, the military administration of the Empire has been thoroughly reformed, the

ARMY APPROPRIATIONS

have been increased, and there is every reason to suppose that the estimates made on the 25th of November, 1879, are not very far from being accurate. These estimates give, as ready for immediate mobilization, 908 Generals, 31,414 officers, and 865,425 men of the regular Army, 742,144 reserve, 1,972 officers and 51,359 men belonging to the Cossacks, 105,946 irregulars. That Russia can keep up such an establishment as this for any length of time is not to be expected, as it is not to be expected that she destines its employment solely in Central and Eastern Asia, where 30,000 men are spoken of as the maximum of both armies of operations, of which about one-third are thought sufficient for the first operation against the Celestials. Possibly Russia may make a mistake in that quarter, where a declaration of war will immediately follow the completion of the Trans-Siberian Railway.

It is hard for any one to think of

JOHN CHINAMAN AS A FORMIDABLE ENEMY.

What warriors could be thought formidable if dressed in petticoats? Yet the heathen are extraordinarily brave, or rather, they have a contempt of death and danger which, as they can readily bring a million of men into the field, might make them exceedingly dangerous if they were disciplined and commanded by intelligent officers. Fortunately for Russia, they are not, but, unfortunately for that power, they have been deserted by that "big medicine man," Gordon, who, on leaving the flowery land, has bequeathed them a series of military precepts, *vide* his book, which would insure the discomfiture of any army and the conquest of any nation with whose military direction he may ever be connected. From this warlike missionary's exit from China, I presume that he and the Mandarins did not pull together, wherefore they will probably be deaf to his sermons, all the more that a goodly number of German officers have gone to take his place. If they had a year or two in which to work, these gentlemen would doubtless accomplish something; but they have barely time to overcome the two great defects of the Chinese Army, the absence of all unity and centralization. With the exception of the Guard, which is under the command of the Minister of War, all the troops depend upon the Provincial Governors, by whom they are organized, armed, equipped, and drilled according to the instructions of a special Ministry. This is the cause of the first of these two defects; the second is the result of their organization, which is local. Each soldier must provide for his personal wants and for those of his family, and consequently hires himself out as a day laborer.

HE IS DRILLED OCCASIONALLY,

but so rarely that his military education never gets beyond the most elementary rudiments. As to his armament it is heteroclite; bows and arrows in some place, matchlocks in others, and nowhere dangerous for European troops. Their officers have no idea of the art of war, and are ignorant even of the disposal of their troops for an engagement; the examination which they pass must demonstrate only their ability to use the bow on horseback and to play like jugglers with weighing 50 pounds each. 1878 China attempted the introduction of European reforms into her Army. She purchased 275 heavy guns and 250 field pieces from Krupp's foundry, but no teams were procured either then or since, and her artillery corps has not yet been organized. Perhaps it was not on this account that Col. Gordon advised his friends "Not to bother themselves with cannon which make more noise than they do harm, but to put their faith in rockets." (?) In short, the Chinese Army can scarcely be said even to exist on paper. It is a horde of individuals, cruel and sanguinary bandits, who will burn and massacre, but are incapable of opposing any serious resistance to the Russian forces. I need not tell of the worthlessness of the Celestial Navy, which is only worthy of a place by the side of the Celestial land forces, and yet if China should ever resolutely undertake the military organization of her immense population what a redoubtable enemy she might become. Luckily for Russia and her neighbors, such is not the situation.

GENERAL.

TRANSLATIONS of Mill, Spencer, and Darwin are common in Japan, where the "Origin of Species" has a large sale.

MOODY and Sankey spent eighteen days in Salt Lake City, on their way to San Francisco, holding crowded meetings daily.

A BROTHER and sister have become husband and wife, at Youngstown, Ohio. Learning that they were to be prosecuted, they have fled together.

So many persons have committed suicide by jumping off the three bridges across the Tiber at Rome that a philanthropical society keeps boatmen at each bridge in order to rescue the unfortunate.

THE people of Chicago handled and packed 2,875,000 hogs during the summer salting season, from the 1st of last March to the 1st of this month, and yet found leisure for literature and arts. Now they are immersed in their winter packing, and still easily combine pork with politics and poetry.

IN France many professors of the art of cooking feed a family for so much a day and an additional sum for each guest. They bring the provisions, submit a menu, which may be changed, and send a cook to live in the house. At a dinner party they or their aids superintend. They are answerable for the cook.

JAPANESE paper air cushions are said to have some advantage over those made of rubber. They may be rolled into a package of smaller dimensions, when not in use; they will not stick together as rubber does after it is wet, and for pillows they are better because they have no odor. Their strength is marvellous; a man weighing 160 pounds may stand upon one without bursting it. They are said to be waterproof, and to make excellent life preservers.

THE Earl and Countess of Fitzwilliam are passing the winter in Ireland at their beautiful seat Coolatin, in the romantic county of Wicklow, among a tenantry by whom he is much beloved. His tenants are in a most prosperous condition, and the maxim that property has its duties as well as rights is fully carried out. Mr. Parnell's property is close by, and though not at all illiberally managed, his tenants are not all in the same prosperous condttion.

WHEN Napoleon formed the Legion of Honor there was much discussion as to the colour of the riband. Napoleon was for white, probably because on state occasions he loved to dress in scarlet, and saw how happy the colour contrast would be. It was represented that white was preeminently the colour of the exiled house. He then suggested red, and was met with the objection that red was the revolutionary colour. But remembering that blue was the colour of most of the uniforms in the army, and that red would answer as a contrast, he said, "Let it be red."

The Guitar.

The guitar is but little used now in England, though at one time it was very fashionable. Other nations who still employ it, call it by several names, most of which will be described hereafter. The guitar. is rarely, if ever, employed as an orchestral instrument, but is very valuable as a portable means of accompaniment.

The existence of frets upon the guitar limits the number of modulations capable of being performed in the normal tuning. When it is desired to make a complete change of key the *cado tasto* screwed over the finger-board alters the tuning at any desired point, or a temporary change is made by the *grandebarre*, that is by laying the forefinger of the left hand completely over the strings, the remaining fingers being engaged in stopping a chord. In the classification of musical instruments it is convenient to speak of three general sorts, wind, string, and pulsatile. The guitar belongs to the second kind, and may be said to represent a very large family universally distributed, bearing a variety of names according to the tongue of the nation by which it is used. All instruments may be considered as belonging to the guitar family which poseess a resonance body or sound box, together with a finger-board, against which the strings with which they are furnished may be pressed or stopped.

Following the course of history, we find that instruments of the guitar kind are of great antiquity, as well as of general use by people of all nations.

The kinner and nebel, mentioned in the Bible, were stringed instruments, of the guitar or harp family, but of their exact nature it must be confessed little is known, though much is conjectured.

The Egyptian frescoes and other paintings, valuable as showing the frequent use of musical instruments, include several specimens of the harp and guitar family. The Nefer, one of the latter class, had a neck. sometimes with a carved head, and was furnished with three strings, and had a resonance box. Upon the neck, or finger-board, frets were tied or fastened, as in the modern guitar. Each string is said to have been able to produce two octaves.

The three strings were supposed to correspond with the seasons of the Egyptian year.

Grecian writers, describing Egyptian instruments, do not afford much real information concerning them, and all attempts to reconcile their statements only lead to confusion; for conjecture is nst conviction Too moch trust has been placed in the accuracy of sculptured and painted images, and various theories have been founded upon the character of musical instruments as deduced from their represented forms. As with ancient, so with modern musical instruments of far-away countries; travellers' tales have too often been trusted, and their statements received as conclusive, when in the mojority of instances they are confessedly ignorant of the subject upon which they give "authoritative judgment."

Philology does not, after all, furnish the best assistance towards determining selationships in this matter, and, as a rule, the picture of an instrument offers but a little help or guide in the matter. Refrences of musical instruments by the poets of several ages offer no aid whatever, but on the contrary, often tend to mislead. If they were trustworthy, it might reasonably sssumed that no other instruments but the lyre and harp were ever employed to "assist the muse." But colloquial terms—often despised by classical poets—are of most value to the historian, and it is therefore found that the common names applied to a stringed instrument with a finger-board, kissar, cittern, zither, kitra, kithara, geytarah, guitar, point to the common origin.

There is no question but that the guitar was introduced into Europe after the Crusades. The name, purely Eastern, has been adopted with only a variation in spelling as European use demands. The modern Egyptians call it "gytarah barbaryeh," the guitar of the Berbers, the people who are the direct descendants of the ancient race of the country; and as names and words in the East vary in the course of ages less than those in the West, it is likely that the word is of high antiquity.

When Hans Christian Andersen, one of whose dearest hopes in going to Sweden had been to meet Fredrika Bremer, was presented to her on the deck of a steamer, she had never heard of him, and was quite stiff. He produced one of his books, however, as she left him; and after an hour or so she hurried back. "I know you *now*," said she; and thus began a lifelong friendship.

RELIGIOUS MATTERS.

It is stated that, since disestablishment, the Irish Church has raised $20,000,000 for the cause of religion and charity. Nearly $1,500,000 per annum has been secured for the stipends of the clergy. Upward of 1,200 incumbents receive an average of $1,050, and 211 receive an average of $600 per annum.

The Sixth Triennial Conference of the German Baptists of America was held recently at St. Louis. Delegates were present from 14 States and from Ontario. Prof. H. M. Schaffer was elected Moderator. Considerable attention was given to educational and publishing interests, and a new hymn-book was ordered.

In the discussion recently in the Glasgow Presbytery of the Kirk of the volume of "Scotch Sermons," Dr. Norman Macleod ascribed the origin of the agitation against the sermons to a member of the Free Church, and asserted that more than one distinguished writer in the volume was in total ignorance of the other sermons with which theirs were to be combined.

The commotion in the Church of Scotland growing out of the publication of the volume of "Scotch Sermons," is increasing rather than subsiding. The Glasgow Presbytery has ordered a committee of inquiry in regard to two sermons regarded as heretical contributed by one of its members, and more recently strong objections was made to Dr. Story, of Roseneath, becoming Moderator of the Synod of Glasgow and Ayr, because he was one of the contributors to "Scotch Sermons."

Recently the Duchess of Edinburgh, accompanied by two ladies and a gentleman, visited Canterbury Cathedral. The verger who conducted the Duchess and party over the building had not the remotest idea who he was guiding until after they had gone the round. Indeed, the Duchess and her suite were asked to withdraw from the north aisle on the plea that no one was allowed to remain in that part during divine service, a request which was immediately complied with.

In his charge recently the Archbishop of Armagh said, concerning the Disestablished Church, that, during the last 10 years, nearly one-half the clergy who occupied benefices at the time of disestablishment had disappeared from among them—some retiring from age and infirmity, some removing to other dioceses, and others having gone to England. Of course, those who went away had carried their commutation capital with them. Owing to these causes, it would become necessary to fall back upon the practice of former times, and place more than one parish under the care of one minister. The candidates now presenting themselves for ordination were generally below the required standard of education. Even the qualification of a collegiate degree had sometimes to be dispensed with. There was such a dead level of uniformity in the value of their benefices that there was little prospect of promotion, and nothing to attract the rising talent of the country.

Carolina's Sweet Sixteen.

A curious petition was that addressed in 1733 to the governor of South Carolina by sixteen maidens of Charleston. It ran thus: "The humble petition of all the maids whose names are underwritten. Whereas, we, the humble petitioners, are at present in a very melancholy disposition of mind, considering how all the bachelors are blindly captivated by widows, and our own youthful charms thereby neglected; in consequence of this, our request is that your excellency will, for the future, order that no widows presume to marry any young man till the maids are provided for; or else to pay each of them a fine for satisfaction for invading our liberties, and likewise a fine to be levied on all such bachelors as shall be married to widows. The great disadvantage it is to us maids is that the widows, by their forward carriage, do snap up the young men, and have the vanity to think their merit beyond ours, which is a great imposition on us, who ought to have the preference. This is humbly recommended to your excellency's consideration, and hope you will permit no further insults. And we poor maids, in duty bound, will ever pray." The forlorn sixteen would have approved the edict of the Portuguese king, which forbade widows more than fifty years old from remarrying, on the ground that experience taught that widows of that age commonly wedded young men of no property, who dissipated the fortunes such marriages brought them, to the prejudice of children and other relatives.

French Orders.

The badges of the inferior orders of the Legion of Honor have been pretty eagerly sought for by foreigners, even by Englishmen. It is related of an English merchant who had rendered some service to Napoleon III. that he was invited by that prince to spend a few days at Fontainbleau. When the merchant took his leave, the Emperor asked him whether he could be of service to him in any way. "May it please your Majesty," stammered the guest, "I should like—the Legion of Honor." Repressing the national habit of shrugging his shoulders—ever so slightly—Cæsar replied that he should be most happy to give him the cross. "I fancied," he added, "that your government did not allow you to wear foreign decorations. However, if you can make it right with the English administration, you are heartily welcome. Meanwhile you must permit me to give you a cross of the Legion worn by my uncle the King of Westphalia." So saying, the Emperor went to a drawer, and took out a diamond that had once glittered on the marshal's uniform of Jerome. It was handsomely done: grave as were his faults, Napoleon III. always showed himself a gentleman.

The Legion of Honor has this agreeable peculiarity, that it is accompanied by pensions—in the case of military knights. A plain chevalier receives 250 francs a year, a Grand Cross 5000. The chancellorship of the order is a very snug berth indeed. Besides a fine income, the Chancellor has handsome apartments rent free and "perquisites." Of course the post is generally bestowed on an old soldier; though on the restoration of the Bourbons in 1814 it was given to an eminent clergyman whom it had been found difficult to put in any other place. The porter of the palace caused some amusement by addressing the abbe, on his official entry, in the set phrase which he had used toward successive captains of great fame: "You have only to command, marshal; it will be my business to obey."

There is one other French order of importance: the military medal. It is of gold, encircled in silver, and suspended by a short ribbon of green and yellow. Coveted almost as much as the Victoria Cross, its numbers have been extended so as to include civilians, the proportion being one of the latter to every two soldiers or sailors. When Bazaine had been for some time a Marshal of France and Grand Cross of the Legion of Honor, he received the military medal—a graceful compliment, which was meant to indicate that the cup of his honors was full, and that there was nothing left for his imperial master but to give him the remainder of the lesser decorations.

Fixing Her Hair.

When a girl concludes to put up her hair and make herself look sweet, the best policy is to let her have her own way. She can't be drawn away from her mirror by any of the ordinary things of this life. A fire will sometimes do it, but it has been shown that even a fire may fail to excite some girls. The other night a New York lodging-house took fire, and at a most uncomfortable hour, when most girls probably have their back hair down. One of the young ladies heard that the place was burning down, but she didn't feel like making her appearance before the crowd that had gathered in the street looking like a perfect fright. She shut the door leading into the hall to keep out the flames and went to her mirror to fix her hair. Anybody who has waited for a girl to fix her hair knows that it takes time and a great deal of it. This girl wasn't any quicker than the average, and she was very particular about having her hair done up exactly as it should be. The fire had cut off her chances of escape by the stairs, and her lover, after appealing to her for some time, finally lost his patience and got away without her. A fireman got up to the room on a ladder and she made him sit on the edge of the window and wait until she had arranged her hairpins and ribbons for a right sort of public appearance, then she threw herself into his arms—it was so romantic—and slid down the ladder with him, looking just sweet. The whole thing was a tremendous success, but when the careful young girl was safely landed on the pavement she found that she had forgotten her stockings.

The *Osservatore Romano* tells its readers that, notwithstanding the terrible trials under which the Irish are now suffering, the faithful of Cashel, mindful of the needs of the Holy See, have contributed a sum of money equivalent to 60,000 francs for their Archbishop's present to the Pope.

INTERESTING ITEMS.

Belgium had no gold coin until 1847.

A gentleman writes to the London *Standard* that cats can be trained to retrieve game as well as dogs do. When he takes his gun in his hand his three cats are in ecstasies in anticipation of sport.

Prof. Levi. in lecturing at King's College, London, on the value of a good harvest to trade and manufactures, said that every day of sunshine during forty or fifty days after July 15, St. Swithin's day, was worth about $5,000,000 to the country.

An insane woman at Cleveland laid a little boy down with his head between two stones, and placed a heavy timber across his neck in such a way that he was held fast without being choked. She left him to die, and he had almost done so when discovered.

A soap-eating match was a diversion at Springfield, Ohio. The quickest devourer of a bar of yellow soap got a prize of $5. The winner performed the feat in less than an hour, but was much longer in the hands of the physician, because the lye poisoned him.

That gigantic floating palace, the Livadia, made, in passing from Cork to Gibralter, upward of seventeen miles an hour, while there was a total absence of any disagreeable motion, her "pitch" being but one degree. This may lead to a great change in ship building.

The subcutaneous injection of sulphuric ether, in three-drop doses, at intervals of 12 hours, is recommended by Dr. Comegys for the successful treatment of sciatica; and he also thinks that the substitution of ether for ergotine in dealing with tic-doloreux would give good results.

Ozark furnishes another tough Arkansas story—that White Oak Mountain is flinging out stones of all sizes up to two pounds in weight, which fall like hail into the fields and disperse the inhabitants. Were the stones hot, or were smoke and flames seen, a volcano might be surmised; but the affair is spoken of like one of simple stone throwing.

Few persons outside of England, where coursing is one of the national sports, have any idea of the value of greyhounds. At a recent sale ten dogs brought 711 guineas, the highest being sold for 400 guineas and the lowest 10 guineas. This is not in excess of former sales, Bedlamite and Peasant Boy, two well-known hounds, each having brought 500 guineas, and for master McGrath, probably the most famous dog ever bred in England, his owner, Lord Lurgan, was offered the sum of £4,000.

Ships that will not sink are to be desired in these times, and an Englishman named Lamb thinks he has one in a steel steam launch, which has seven flat air-tight cylinders on each side. There are some minor novelties in construction, but there seems to be no difference in essential principles between Mr. Lamb's and the ordinary compartment system. This latter might do better were it rigidly kept free, in practice, from improper use in the stowing of cargo and surplus material.

The bridegroom of a Waukegan wedding was a Baptist and the Bride a Methodist. They had agreed that, immediately after the ceremony, they would decide by chance which should embrace the other's religion. The officiating clergyman declined to toss up a cent, partly because he would not countenance such a proceeding, and partly because, being a Methodist, he might be accused of fraud if the bride won. The bride herself finally threw the coin, and lost. When she went to join the Baptists, however, they rejected her because she did not believe in close communion. That displeased the husband, and he went over with her to the Methodists.

The other day an Englishman went over to Ireland to see a friend of his, who is an Irish landlord. He said that he should like to meet one of the most ardent opponents of landlords, and his friend referred him to the village blacksmith, who, he said, was a good enough fellow, but who, he believed, contemplated shooting him shortly. To the forge he betook himself, and the blacksmith explained the wrongs of Ireland. "Are we not," he said, "suffering from absentees taking from Ireland all the money that we earn, and do you suppose that we mean to continue to pay this tribute to the Saxon?" "But," replied the Englshman, "here there are many resident landlords." "You are mistaken," answered the blacksmith. "I know the country, and I tell you that it is full of absentees."

Monstrous Hides.

HOW THE SKINS OF THE RHINOCEROS AND BOA-CONSTRICTOR ARE UTILIZED.

The hides of the bull, bear, cow, calf, sheep, goat, kid, and even the alligator, for years past, have been sold in the leather markets, and are considered the most desirable for the manufacture of boots, shoes, saddlery, harness and other articles for the general use and wear of both men and beast. But the ingenuity of this latter day American seems to have no limit. Forests and jungles of the sunny Eastern hemisphere have been penetrated in order to satisfy the wants of fashion and of trade. The hides of the ponderous, clumsy and ugly rhinoceros and the treacherous, venomous boa-constrictor are now being turned into profitable account by manufacturers.

The hide of the rhinoceros, being of the heaviest and thickest description, would appear to many to be more serviceable for the manufacture of saddlery and harness, but this is not the case. Manufacturers and dealers in these articles have discovered this most endurable leather to be of little use in their trade, because, owing to its solidity and thickness, a needle of any power or sharpness can hardly be made to penetrate it. Some two months ago a manufacturing firm tested the durability and usefulness of rhinoceros hide in the manufacture of a carriage spring. It was patented, but rhinoceros leather was in too great demand to satisfy the supply of these springs, and only by slow work could orders be furnished; then the result of this innovation developed itself, and the hide of the mighty beast, it was discovered, could not withstand as much of wear and tear as the delicate kid, if made in the same thickness and applied to the same uses.

The skin was tanned and imported here by foreign concerns, and when placed on sale, brought very high prices. Its general utility was not known to a very great extent until lately. At present the hide of the rhinoceros is chiefly adapted to the manufacture of jewellers' buffing wheels, which are required in making a polish on gold jewellery, like that brought out in burnishing brass. In Germany and England there are about a dozen tanneries where the skin of the rhinoceros is prepared for the market.

The skins are sent to the tanneries direct from Africa, in some cases by regular hunting expedition parties. It requires from two to three years' time to prepare the hides of these huge monsters for the leather market. When the time and cost required are taken into consideration, the cost of rhinoceros leather after importation is considerable.

From one whole rhinoceros skin it is estimated that at least 250 pounds can be easily secured for utilization from the tannery, and when assorted will, when sold, bring from $300 to $400. Although it takes nearly three years to prepare one of these hides for the market, at least 100 could be run through the process at the same time.

The skins of the boa-constrictors are supplied through the European market, but are directly brought from the deep forests of both Asia and Africa. The serpents are trapped and secured by the slaves of Oriental, Turkish and Egyptian tradespeople, who have long been supplying the demands of snake charmer, showmen and stylish dames and damsels of foreign countries. The snakes are often worn around the necks and arms of these people while alive. They are made harmless by the skill of the necromaneer or serpent-doctor, who is honoured for his wonderful powers in successfully tearing out the fangs and drawing the deadly poison from these serpents.

Ladies, waist belts and chatelaines are worn made of the serpents' skins upon the streets daily. Such appliances create curiosity wherever seen, looking so wild and barbarous in their design as to cause doubt as to their genuineness. They bring good prices. Card, cigarette and cigar cases and portemonnaies are made to order from the same material, as well as small satchels and shopping bags. In securing these king serpents of the forest and jungle, the greatest of dangers are encountered.

The manner of preparing the skins for the tannery is of a delicate nature. After the serpent has been put to death by a means that will preserve the skin from any injury, the body is passed over to a taxidermist, who strips the hide as he would the skin from an eel. The tanner doctors the frail hide so that it becomes perfectly pliable, and retains all its natural appearance and colour as in life. Boa-constrictors, though a very ferocious and dangerous species of serpent, are also of a very costly order to obtain. In this country they have heretofore been considered only in the light of an attractive feature among many curiosities attached to a circus, side show, or private or public museum.

GENERAL.

A MAN committed suicide at Columbia, Ky., by tying a handkerchief around his neck and tightening it with a cane.

THE New-Zealanders are destroying their forests in a manner so reckless that there is a fear not only of a scarcity of timber, but that the climate will soon be changed for the worse.

SOME one has said, what thousands have observed, there is nothing that keeps longer than a middling fortune, and nothing melts away sooner than a great one. Poverty treads upon the heels of great and unexpected riches.

Two Texas desperadoes agreed to fight with knives in a closed room at Fort Worth. They put up their watches as forfeit, and, as both had shown reckless daring in former affrays, it was believed they fully intended a deadly duel. They were prevented by arrest.

A MECHANIC at Beaufort, S. C., intent upon suicide by drowning, but desirous that his body should be recovered, fastened lead to his head and life preservers to his feet before leaping into the water. So he was quickly drowned, while his legs floated.

THE recent earthquake at Lisbon, Portugal, seems to have caused little damage; but it recalls the disastrous one of 1765, by which that city and about 60,000 people were destroyed. Severe shocks have also been experienced lately in other Spanish towns and in sections of France.

So the Prince of Wales is 39 years of age. He may be as much again before the Queen takes it into her head either to die or to resign. Really this longevity trick leaves a young fellow no show whatever, He is used up and gouty before he has the slightest opportunity of showing what he can do. Well, well. There is no help for it but patience. All things come to him who can wait.

RECENTLY Prof. Huxley said that ninety-nine men out of every hundred became simply obstructed after sixty years old, and were not flexible enough to yield to the advance of new ideas. The world, he thought, would be benefitted by any man who had taken part in science being strangled after sixty. This may be meant for Brother Ruskin, who lately wrote to Glasgow students that he loathed liberalism.

JUSTICE SMITH said, on opening his court at Connorsville, Tenn.: "Well Henry Smith is arraigned for assaulting his father." The magistrate had on the previous day knocked his father down with a club, and it was himself that he was now arraigning. He continued: "The evidence is conclusive, and I'm not sure but I ought to send myself to jail for ten days. But, as this is my first offence, and I certainly had a good deal of provocation, I will simply impose a fine of ten dollars."

THE *Londonderry Sentinel* says: "At all events, so far as Ulster is concerned, she will not shirk her duty; and it will be well for our rulers to remember, ere too late, that if they leave the loyal and well-disposed people of Ireland much longer to the mercy of demagogues and assassins, and the present reign of terror is allowed to continue, the men of the north may again be compelled to seek stronger remedies for the protection of their lives, property, and liberties." The rebellion of 1798 began among the Presbyterians of Ulster, a circumstance of which few are aware.

THAT the hardest steel is not the most durable for railroads appears from an examination of the wear of some of the steel rails on the Great Northern line, England. Seven of the rails, which lay side by side on this road, were taken up and tested, and it was found in one instance, that a hard rail had been worn away one-sixteenth of an inch by traffic amounting to 5,251,000 tons, while soft rails for the same amount of wear had withstood 8,402,000 tons for the hard rail and 31,061,000 tons for the soft rail, the wear being the same—one-sixteenth of an inch. Analysis showed this last rail to consist of 99,475 per cent of iron, and minute quantities of carbon, phosphorus, silicon, manganese, sulphur, and copper.

A Rebel Telegrapher.

EXPERIENCE RELATED BY EX-GOV. BULLOCK OF GEORGIA.

Many times, and in various ways through life, my practical experience as a telegrapher has been of valuable service to me. It is, perhaps, not entirely forgotten that, a few years ago, there was a "misunderstanding" among the politicians, and that ultimately the able-bodied men on either side made a good deal of noise about it. Well, I was on the south side of that noise, and, being patriotic but not belligerent, I gave my uniform to a chap who thought he had an enemy, and devoted my energies to finding some to serve the confederacy efficiently that did not at the same time involve the risk of a stray bullet depriving the government of my usefulness. There was quite a number of other patriots in the express company's management who harmonized in my idea; and, as a natural consequence, we were soon impressed with the great necessity that existed for the express company to build and operate telegraph wires over routes not covered by existing lines. Several of us were also stockholders in the American Telegraph company, and when the noise hitherto spoken of interfered with "sound reading" between Washington and Richmond, we felt it to be our duty to take charge of the lines this side, and we became the "Southern Telegraph company." You will see that, with all this array of usefulness, it would, indeed, be an unwise and thoughtless, not to say hard-hearted, conscript officer who would believe it his duty to send us to the front as musket bearers! If he could see, as many of them did, the tireless industry with which express men devoted themselves to the study of dots and dashes—beating a tattoo for freedom on office desks, car safes, eating-house-tables, in fact anywhere that would echo the evidence that they were telegraphers and entitled to exemption—the certificate of "detail on telegraph duty" would be sure to come.

To pass the inspection of the conscript officers it was necessary for the traveler to have "duty orders," "furlough," "exemption papers," or a black skin; you can therefore imagine the satisfaction a patriot would feel when he exhibited his detail as a telegraph operator and knew that he was more likely to serve his country to the end of the war than the poor fellow with but one arm or one leg, traveling home on furlough.

Many of the inconveniences of the early telegraph days were repeated here during the war. Insulators were made of clay with a glazing. For wire we depended on the uncertainties of blockade-running and the Morris wire-mill, at Richmond, which turned out only short lengths, and few of those. Old magnets were rewound and old instruments rebuilt. Nitric acid was hardly obtainable, and substitutes hard to be discovered and used; but the wires were kept working and new lines were rebuilt.

When Gen. Sherman started on his excursion from Atlanta to Richmond, via Savannah, active industries on that route were inaugurated for telegraphers as well as fighters. The coast lines were generally abandoned, and nearly all the business was transmitted over the express wires.

On the morning of the evacuation of Columbia, I left our office and affairs there in charge of Mr. Soule, our telegraph operator, and that night I, being at Gen. Beauregard's headquarters, held telegraphic communications with Soule, he being in Columbia and within Gen. Sherman's command. This, I presume, was the only peaceful communication ever held by telegraph between the contending parties during the war, and might, perhaps, have been less peaceful for Soule and myself if it had been known to either commander.

Probably the most useful service ever rendered by our telegraph was in transmitting information of the surrender, and orders from Gen. Sherman, at Raleigh, to Gen. Wilson, at Macon, to cease operations, thereby saving Macon, Augusta, and other places from hostile occupation. The express wires through the interior part of the country were the only ones in operation at that time.

IN boring for water in the Wimmera district, Victoria, recently, a tree was passed through for 6 feet at a depth of 250 feet, and the cup brought up several fruit-stones similar to the nuts of plums; some were smashed, but the kernels were recognizable. It seemed evident that there was a grove of trees there.

MONEY is being so freely contributed for the purpose of clothing and civilizing benighted Africans that it is becoming profitable to go to Africa and be a heathen.

SCIENTIFIC GOSSIP.

PROF. TASMANIA attributes the immediate cause of death by hanging to the closing of the respiratory organs.

THOSE who will smoke cigars would do well to use a mouthpiece of some kind or other. It has been ascertained that some of the ways in which cigars are made are apt to cause sore mouth of a dangerous and persistent kind by transmitting the poison which is said to be so prevalent in China as to be the bane of that country.

THE lighting of the reading-room of the British Museum by the Siemens electric lamp has been resumed for the winter. The apparatus of the lamps are now fitted above the arcs; brown japanned reflectors send the light to the floor, and topaz-colored glass screens are placed beneath the arc to intercept the blue rays which interfere with the purity of the light.

THE electric lamp can prove quite as fatal as the kerosene lamp, each in its own way, of course, if people do not take care. Recently one of the men on board the Czar's new yacht, the Livadia, was asked to support an electric lamp for a short time before it was hoisted into position. In some way or other he managed to divert the current from the candle and sent it through his body, and he died instantly.

EXCELLENT work will no doubt be done in the near future at the Warner Astronomical Observatory at Rochester. The telescope—the third largest in the United States—will be 23 feet long, and will have a lens 16 inches in diameter. Prof. Swift will have, with this telescope, a wider field for his powers of observation that have proved to be so fertile under less advantageous circumstances.

As a simple lecture-room experiment illustrating the appearance of ozone when liquids are evaporated, Dr. R. Boetiger recommends the following: A piece of paper is evenly moistened with starch containing iodide of cadmium. A few drops of alcohol or ether is ignited. When the flame is extinguished the paper will be of a decidedly blue color, from the action of the ozone formed during the evaporation.

A COMMISSION of 27 members will carry out the revision of the German "Pharmacopœia" at Berlin. Sixteen professors from various universities, five apothecaries, and six physicians and surgeons of high standing in their vocations, make up the commission. Besides these, the forthcoming work will have the benefit of the experience of two military physicians and a military surgeon, who have been specially selected by the Prussian War Office. The labors of these men were commenced fully a fortnight ago, and the result is expected to be of a very high quality.

IN a recently published paper by Mr. W. O. Crosby and Mr. G. H. Barton on the "Extension of the Carboniferous Formation in Massachusetts," the authors infer that although the Norfolk County basin contains only beds of the carboniferous age, yet it is improbable that coal will ever be discovered in its limits, this narrow trough having become filled with sediments, and converted into dry land before the deposition of the true coal measures began, and this later formed series having been always apparently restricted to a comparatively small part of the main or Narragansett basin.

THE people of Sheffield, Engiand, have the privilegs of using an equatorially mounted telescope in the Public Museum under the direction of the curator. Many an ambitious student in this City would be most thankful to the man who would provide a like aid here for the verification of known and the discovery of new facts. Our intelligent citizens also would find in it a means of elevating and stimulating mental pleasure. We should not long be without even a better instrument if some of our rich and thoughtful men would give the matter their attention.

A PAPER by M. Poirot was read before the French Academy of Sciences, recently, in which he alleged that he had never seen flies, ants, worms, or even scorpions, tarantulas, or rattlesnakes in those places in North America where absinthe plants prevail. He urges the cultivation of the plant as an insecticide, and especially as a preventative against the ravages of the phylloxera. There might probably be safety to the vines, he thinks, if the land were manured with absinthe, as such a course would tend to interrupt, or prove absolutely fatal to, the metamorphoses of the phylloxera.

THE CANADA LUMBERMAN

AND MILLERS', MANUFACTURERS', AND MINERS' GAZETTE.

ISSUED SEMI-MONTHLY AT TORONTO, ONT.

A. BEGG, - Proprietor and Editor.

TERMS IN ADVANCE (Post-paid):

One Copy one year..... $2 00
One Copy six months..... 1 00

ADVERTISING RATES

$1 50 per line per year; 85 cts. per line for six months; 50 cts. per line for three months.

Small Advertisements 10 cts per line first insertion 5 cts. per line each subsequent insertion.

Business Cards, Forms of Agreement, Bill Heads, &c,. promptly supplied to order, at the LUMBERMAN Office.

Communications, orders and remittances should be addressed to A. BEGG, LUMBERMAN Office, 33 Adelaide Street West, Toronto.

TORONTO, ONT., NOVEMBER 30, 1880.

Special Notice.

Parties receiving this number of the LUMBERMAN, who have not yet sent in their subscriptions, will please do so by return mail. Our terms are *cash in advance*, and the LUMBERMAN can only be sent to *paying* subscribers.

PROSPECTUS.

The CANADA LUMBERMAN is now introduced to its patrons, and so far has met with a favourable reception.

Before its publication a large number of lumber and timber merchants and mill owners in the Provinces of Ontario, Quebec New Brunswick, and Nova Scotia, and manufacturers whose line is to supply machinery for mills, saws, axes. files, oil, belting, sleighs, &c., were consulted in reference to the advisability of publishing such a journal.

Their opinion was that such a publication could be made highly useful to parties engaged in the various branches of trade above alluded to, as well as to those more directly interested in the mines and minerals of Canada.

Acting on their suggestions, THE CANADA LUMBERMAN has entered on this extensive and important field, with an adequate sense of the responsibility of the undertaking; and whilst craving leniency until fairly under way, we may repeat a portion of our introductory, viz: nothing shall be wanting on our part to make this journal a full and complete record of the lumber business, and all that relates to the trade in Canada. To this end the latest market reports, the contributions of trustworthy correspondents, trade circulars, etc., will be freely used, to give our readers the best, the earliest, and most reliable information that can be ascertained, concerning the important branch of business to which the journal will be especially devoted; while the mining, the milling, and the manufacturing interests will receive attention proportionate to their great claims on the public.

In short, it will be our endeavor to make THE LUMBERMAN worthy of its title in every respect; and, while giving special attention to the great staple industry to which it is devoted, it will also furnish a carefully selected amount of general reading that will make it a welcome visitor in every family.

Advertisers, especially those dealing in mill, mining, and lumbering supplies and machinery, will find THE LUMBERMAN a very favourable medium of reaching their customers, as it will circulate among these classes, and receive more attention from them than they have the time or inclination to bestow on a general newspaper.

The success of the LUMBERMAN must depend on the support it will receive from the classes above referred to; we trust, therefore, that they will overlook shortcomings at the commencement, and accord to the enterprise their generous and hearty support.

SAD MINING DISASTER IN NOVA SCOTIA.

On the 12th of the present month, one of those terrible disasters, incident to coal mining operations, took place at Stellarton, near New Glasgow, Nova Scotia, by the explosion of the Foord mine, resulting in the death of some fifty workmen, and widespread misery among the survivors. One hundred and ten children have been made fatherless by the sad catastrophe, and thirty-eight widows are left to mourn the loss of their husbands. Never before has such a calamity befallen the mining industry of our sister Province, and it is earnestly to be hoped that the searching investigation now being held, will result in the discovery of precautionary measures that will render like calamities impossible in the future. It is hard, however, to guard against the carelessness of individuals. Men become foolhardy by familiarity with danger, and the rules that are devised for their own personal safety are sometimes disregarded as if they were tyrannical exactions that ought not to be borne. For this deplorable state of feeling there is no cure, unless workmen can be persuaded that their own personal interest is involved in the due observance of every rule laid down for the safe working of the mine, and, perhaps, it would not be mistaked policy on the part of mine owners, to give their workmen some share in the profits of the business. In too many instances, the workman has no interest beyond that of putting in his day's labour, and drawing his weekly pay. That he should, under such circumstances, be a careless worker, goes beyond saying—Why should *he* care? He goes down the shaft in the morning; he comes again at night, and except for those who are waiting for him at home, he has no thought beyond getting through his allotted drudgery.

Judging from the names recorded in the sad list of the dead, the workmen at the Stellarton mine were largely recruited from the descendants of the brave sons of Old Scotia, who settled in such numbers in our sister Province by the sea. And they perished with no less heroic bravery than did many of their ancestors on the gory battle field. But the touch of glory in this case was wanting. The stern struggle with the outraged forces of nature did, indeed, give every opportunity for the display of heroism. But no eye was there to witness it; no pen to embalm it in imperishable language. Nevertheless, incidents are recorded of a deeply touching character. One man went down and stumbled upon two bodies—that of a man and a boy. Bravely he shouldered them—the man first and the boy afterwards—and brought them to the top. What was his unspeakable joy when he found that he had rescued his own father and his own son?—for they were both alive! But suddenly his joy burst into grief as he bethought him, and cried out in anguish, "my brother Robert is still below, and my poor mother will break her heart!" Is it asking too much, that men engaged in such hazardous enterprises should be made partakers, to a moderate extent, in the profits of their labour, as distinct from their pittance of weekly wages? We are sure that the introduction of such a system would vastly improve the moral tone of the working miners, and in the end add to the profits of the mine owners. Sympathy has been awakened throughout the Dominion and in the neighbouring republic for the bereaved families, and contributions are liberally pouring in.

The Foord mine took fire after the explosion and had to be flooded. The water was admitted at a rate, per day, which will take months to pump out; so that much time and loss of capital will be involved before getting the mine into working order. It has been ascertained that there are twenty-five widows, nine old persons, and ninety-six children, below the age of thirteen, making in all one hundred and thirty people thrown upon the charity of the world by this terrible catastrophe. The rest of the bereaved have means to support themselves, but for those who are in want, it is to be hoped that a generous public will make no niggard provision.

THE CALEDON STONE QUARRIES.

Our attention was incidentally called to what has long been felt to be a want in the city of Toronto, viz: a supply of good building stone; that is, stone of good quality, handsome in appearance, not too hard to work, and moderate in price. The opening of the Credit Valley Railway has made accessible the excellent freestone quarries of Caledon, at a comparatively short distance from Toronto, and capable of supplying any quantity of either red or white stone, at about one half the price of Ohio stone. The quarries are owned—one by K. Chisholm, Esq., local member for the county, and the other by Mr. Joseph Pattullo, of Orangeville, and Dr. Pattullo and Judge Scott of Brampton. Those three latter named enterprising gentlemen have formed themselves into a company, called the Credit Forks Stone Co., with Mr. J. A. McIntosh, as manager, for the purpose of developing their quarry. Several orders are now being filled, and it is expected that a large trade will be carried on by the Stone Company and by Mr. Chisholm, in this superior building material. It would be a great convenience were a depot established near the City of Toronto, where supplies could be obtained as required, by builders. So far, sales have been made at the quarries, f. o. b. the price ranging from $6 to $54, per car load—two cords of 128 feet of rubble, or 160 cubic feet of dimension stone making a car load. Those quarries will prove a source of great revenue to the Credit Valley Railroad as the trade increases, as it undoubtedly will, when the superior quality of the stone becomes better known. Shipments have already been made to London, Woodstock, Fergus, Orangeville, and Hamilton; and in Toronto the new Baptist College, on Bloor street, is to be built of the Caledon stone. In Brampton, the Presbyterian Church just finished, is built of this stone, and the blending of the red and white layers gives the stately edifice a lively and handsome appearance. Blocks varying from three feet thick, by six feet square, have been taken out for engine beds, and larger blocks might be got if required.

The locality is well supplied with water power. Mr. Chisholm, who owns several hundred acres in that section, has erected a woollen factory and a saw mill near the "Credit Forks," and it is said that this is one of the few points where a paper manufactory could be profitably established, as any quantity of wood suitable for making paper, could be obtained in the vicinity, within easy transit by rail of any part of the Dominion. This is one of the most healthy sections in Ontario, being the highest point of land in the Province, between Lakes Huron and Ontario. The River is well supplied with speckled trout, and we understand it is contemplated by the enterprising and indefatigable manager of the Credit Valley Railway, to make this romantic neighbourhood one of the most attractive places of summer resort for tourists and pleasure and health seekers to be found in the Dominion.

Mr. Church, of Cataract, is the owner of a tract of land not far from the quarries above referred to, but we have not learned the particulars as yet respecting those quarries on his land.

OUR QUEBEC LETTER.

NAVIGATION CLOSED—TIMBER IN THE COVES—A LULL IN THE TRADE—NO CHANGE IN PRICES—MILLING NOTES—MINING INTELLIGENCE—NEWS FROM THE GOLD MINES OF BEAUCE.

QUEBEC, Nov. 22.—The season of navigation may now be said to be closed, and the Allan Mail Steamship which sails from this port on Saturday next, will leave behind it a deserted harbour. But one solitary timber vessel now remains, and with her it is not a matter of choice to be still here, but of necessity. The "Bridgewater," with a cargo of lumber on board, has been detained by a number of suits in the Vice-Admiralty Court, arising from quarrels between the captain, the owner and the crew. To add to the troubles of the owner, the captain and crew have left his service at the last moment, and in the westerly gale of yesterday morning, the vessel went ashore at Burstall's Booms. If the "Bridgewater" gets to sea at all this Fall, her owner may consider himself a lucky man.

TIMBER IN THE COVES.

After all that has been said and anticipated about the small stocks that would winter at this port, it appears that the amount in the Coves is considerably more than had been calculated. This is to be accounted for mainly by the fact that the Fall fleet was much smaller than was expected. The principal portion of the stocks now wintering here, would have been shipped ere this, had vessels offered. Three rafts of square white pine are all that are held in the Quebec Coves in first hands this winter.

A LULL.

There is necessarily just now quite a lul in the timber trade. Nothing is offering, and there is no demand in the local market. Merchants are closing their accounts for the season, and taking stock in their Coves. It is impossible, at present writing, to form any calculation of the stocks wintering in the various Coves. Estimates will shortly be made however, and the readers of the "LUMBERMAN" will be kept posted. As there are no transactions, there are in consequence no changes to report in the prices. These may be set down as similar to those reported in my last letter.

OPERATIONS IN THE WOODS.

It is impossible just now to form an accurate idea of operations in the woods. By about Christmas, however, merchants, brokers and cullers will have some estimate of the probable make of the season. Our merchants at home, or the correspondents of such as remain on this side, will also by that time be in a position to judge of next year's prospects, and we may expect to hear of further large sales for future delivery.

MILLING NOTES.

The Montmorenci and other mills in this district, have as much as they can possibly do, and will work full time all winter. It is said of the Montmorenci mills in particular that their entire winter's cut has been already sold.

Quite a local demand for lumber has arisen in the old mining district of Beauce. In order to supply the requirements of this part of the country, Mr. Louis Gendreau, who is himself largely interested in mining lands, is erecting at Jersey Point, St. George, on the Chaudiere river, a very extensive steam saw mill, the necessary machinery for which has been recently purchased in Montreal. The mill will be in working order before the winter is over, and Mr. Gendreau is now getting out 25,000 to 30,000 pine and spruce logs for next summer's cutting.

MINING INTELLIGENCE.

The Mr. Gendreau above alluded to has just concluded the sale to a New York capitalist for $6,000, of some 51 acres of gold lands forming the principal part of Lot No. 15 of the De Lery Concession on the Gilbert river, Beauce.

The Beauce Gold Mining and Milling Co. is working the adjoining Lot, No. 14, De

Lery Range, on a large scale, the Superintendent being Mr. Walter J. Smart. The differences which have existed for some time past between this company and Mr. Lyonais, who sold them the rights upon which they are now working, have been amicabiy arranged.

Lot No. 13 De Lery Concession is worked by Mr. J. Ainsworth. The last few washings on the works of this property are said to have shown an average yield of $200 a day,—being the produce of the work of 35 men. One of the men found a nugget a few days ago, weighing four ounces, and worth somewhere about $80.

The preparations in that part of the county give promise of very large operations for next year. It is believed that in the spring, over 1,000 miners will find employment in Beauce. A few days ago, information was received here that a new company, to be called the Boston & Chaudiere Mining Co., had been established in Boston, with a capital of half a million dollars, the whole of which was subscribed in the space of a few hours. Some of the English companies operating in the diggings profess to suffer in their work from the severity of the restrictions imposed by the recent Provincial Act relating to mines, and one of their representatives is actually at Ottawa, for the purpose of inducing the Federal Government, if possible, to declare the whole of the legislation in question, *ultra vires*.

Great inconvenience is also experienced in the lack of telegraphic communication between St. Joseph and Jersey Point. The enterprise necessary to construct this short line would be richly rewarded. The principal miners of the district have even offered to supply the necessary poles. Which of the Canadian telegraph companies will take the matter in hand?

STADACONA.

New Brunswick.

Canada is so extensive that the inhabitants of one portion of it may not have much acquaintance with other portions. The following extracts from a pamphlet recently published by the Hon. Mr. Adams, Surveyor-General of New Brunswick, will convey much information respecting that Province. Mr. Adams says :—

The Province of New Brunswick, one of the eight Provinces of the Dominion of Canada, is bounded on the North by the Province of Quebec, the Restigouche River and Baie des Chaleurs; on the East by the Gulf of St. Lawrence and Northumberland Strait, which divides it from Prince Edward Island; on the South by a small portion of the Province of Nova Scotia, Chignecto Bay and the Bay of Fundy; on the West by the River St. Croix and the State of Maine in the United States of America.

The area of New Brunswick as given by the Census of 1870-1 is 17,393,410 acres, or about 27,177 square miles. The greatest length of New Brunswick is from North to South, a distance of about 230 miles, and the greatest width is about 190 miles, with a sea-board of some 545 miles.

The population in 1861 was 252,047, and in 1871 it reached 285,777, showing an increase in ten years of 33,730. At the present time (1879) it would probably reach something over 310,000.

The quantity of land already granted or located by the Crown is given at 9,753,804 acres, and vacant lands at 7,639,606, up to 31st Oct., 1878.

PRINCIPAL TOWNS.

Saint John, situated on the mouth of the River Saint John. It is the Commercial Capital of New Brunswick, and has a population of about 45,000, including the town of Portland. It does an immense shipping business with foreign and local markets, and is largely engaged in manufactures of many kinds. Its harbour may be reckoned among the finest on the Continent, and is open during all seasons of the year. As a shipping port Saint John ranks fourth in the British Empire.

Fredericton, the Capital of New Brunswick is situated on the south-west bank of the River Saint John, about ninety miles above the City of Saint John. Its streets run at right angles, and are adorned with trees, which add greatly to its appearance during the summer and autumn months. The House of Assembly, Government House, and the different Departmental offices, the University of New Brunswick (formerly King's College), and the Provincial Normal School are located here. Considerable trade in lumber is done here, principally in deals' shingles, clap-boards, railway sleepers, etc. The population may be estimated at about 7,000.

Among the other towns of the Province may be mentioned the following, varying in population from 1,000 to 3,000 or more :—

In Restigouche County, Dalhousie and Campbellton; Gloucester County, Bathurst and Caraquet; Northumberland County, Newcastle, Chatham, Douglastown, Nelson, Blackville, Boiestown and Doaktown; Kent County, Richibucto, Buctouche, Kingston; Westmorland County, Moncton, Shediac, Sackville and Dorchester; Albert County, Hopewell and Hillsborough; Charlotte County, St. Stephen and St. Andrews; Carleton County, Woodstock; Victoria County, Grand Falls and Andover; Madawaska County, Edmundston; King's County, Hampton, Kingston, Sussex, Rothsay; Queen's County, Gagetown; Sunbury County, Oromocto.

PRINCIPAL RIVERS.

The Saint John, Miramichi, Restigouche, Saint Croix, Petitcodiac, Richibucto and Nepisiguit are the principal Rivers, but the whole face of the Province is intersected with Rivers of different magnitude.

The River Saint John takes its rise in the State of Maine, between 450 and 500 miles from the sea. For some distance it forms the boundary between Maine and New Brunswick, and after running through the Counties of Madawaska, Victoria Carleton, York, Sunbury, Queen's, King's and Saint John, N. B., it discharges itself into the Bay of Fundy. It is navigable for large vessels from Saint John to Fredericton, a distance of ninety miles, but shallow bottom steamers ply as far as Woodstock, and boats run to Grand Falls during rainy seasons. It is a highway of trade during the summer months for crafts of many kinds, which on the down trips bring deals, shingles, clap-boards, etc., to market, and on the up trips articles for the use of farmers on the river sides. Large quantities of fish, including salmon, shad bass and sturgeon, are caught all along the river.

SCENERY, ETC. Wide intervals lie along this river, the soil of which is very fertile. The scenery is of the most magnificent description, ever varying in freshness and beauty. Large quantities of lumber, cut on the river and its tributaries, are driven in rafts, in spring, down the river to Saint John.

The Miramichi takes its rise in the County of Carleton and runs easterly to and through York and Northumberland Counties, and empties into the Gulf of Saint Lawrence. Immense quantities of lumber are driven down this river to supply the many milling establishments along its banks, some of which are the finest in the Province. Its lumber exports are only exceeded in New Brunswick by that of Saint John. It is navigable for vessels of the largest class from its mouth to Nelson, a distance of forty-six miles. Its natural manufacturing facilities are excellent, and their value is greatly increased by having at Newcastle a deep water terminus of the Intercolonial Railway, and the Chatham Branch Railway, intersecting the Intercolonial Railway at Nelson, affording inter-communication and connection with the outside world. During the spring and fall freshets steamers ply with little difficulty on the South West Branch, a distance of fifty miles above Newcastle, and on the North West Branch to Red Bank, as also to the mouth of the River at all seasons of the year. The branches of the Miramichi extend over and drain fully one quarter of the Province. It is noted for its fisheries : Salmon, Lobster, Trout, Bass, Smelt, etc., are exported in enormous quantities to Great Britain, United States and elsewhere during the whole year.

The Restigouche for a considerable distance forms the northern boundary of the Province (which it divides from Quebec) and discharges into Baie des Chaleurs. Much lumber is also cut and driven on this river. The harbor affords security to all vessels, for its depth of water and safety of anchorage.

The Saint Croix divides the State of Maine from the Province of New Brunswick at its south western part. Its sources is a chain of large lakes called the Cheputnecticook Lakes. A small steamer runs for twenty-four miles on these lakes up to Princetown. Considerable lumber is still cut in the vicinity of the river, but the largest part has been culled some time since.

The Petitcodiac discharges into the Shepody Bay, at the head of the Bay of Fundy, after running through the fertile and grass-growing Counties of Westmorland and Albert.

The Richibucto is the largest river, excepting the Miramichi, emptying into the Gulf of Saint Lawrence.

The Nepisiguit takes its rise on Northumberland County, near the head waters of the Tobique River, a branch of the River Saint John. It runs easterly and northerly and discharges into Baie des Chaleurs. It is not navigable for large vessels. Tourists visit its waters every summer to fish with the fly for salmon. The Pabineau Falls, nine miles from its mouth, and the Grand Falls, twelve miles farther up the river, are noted for their rugged beauty and picturesque surroundings.

The Baie des Chaleurs abounds in Mackerel, Salmon, Cod and Lobsters. There are a number of factories for packing Lobsters along its shores.

FORESTS.

The forests abound with a large variety of trees. Among the principal growths may mentioned the Spruce, Pine, Birch, Beech, Maple, Tamarac, Hemlock and Cedar.

The Spruce tree is now the most valuable of all the varieties, being the most plentiful, and most extensively used in ship building. It is also from this tree that the principal part of the sawn lumber exported from the Province is manufactured.

The Pine tree, of which there are several varieties, was in former years very plentiful, but is now comparatively scarce. It is a much finer wood than the Spruce, and the lumber manufactured from it is much sought after, from the ease with which it can be worked and from the beautifully smooth finish it takes. It is used to a great extent for the trimmings of buildings and sometimes for furnitnre.

The Birch is largely used in ship building, but when exported is generally in the form of what is called square or ton timber.

Tamarac is used in the numerous ship yards for knees, frame work, plank, tree nails, etc. It is a comparatively scarce wood.

Hemlock is principally cut for its bark, which is used in the many tanneries throughout the Province in the manufacture of leather. At present there is a great demand for this bark, and unless more stringent measures be used for the preservation of this valuable tree, before many years the supply will be exhausted. The lumber cut from this tree is now coming into more general use than formerly, being used for the inner covering of buildings. It lasts well under water and is therefore used for wharves, etc. It is also much used for stable floors.

Beech, Maple, Cedar and other varieties of trees grow in the forests, but are not of sufficient commercial value to be noticed.

RAILWAYS.

There are a number of Railway lines in the Province. Beginning at Saint John, the railway centre, and going North and East, we have the Intercolonial Railway running to Moncton and thence to Halifax, in Nova Scotia. From Moncton a branch line runs to Shediac, while the main Intercolonial Railway runs North from Moncton through the Counties of Westmoreland, Kent, Northumberland, Gloucester and Restigouche, crossing the Restigouche River, the northern boundary of the Province, at Metapedia and thence to the City of Quebec.

The Chatham Branch line connects Chatham with the Intercolonial Railway at Chatham Junction, six miles from Newcastle. Another Branch line connects Salisbury, in Westmoreland County, with Hopewell, in Albert County; another runs from Petticodiac Station to Elgin, Albert County, both feeders of the Intercolonial Railway.

Returning to Saint John, and going westward, is the Saint John and Maine Railway, connecting Saint John and Bangor, State of Maine, crossing the Western boundary of the Province at Vanceborough.

Another line called the New Brunswick and Canada Railway runs from Woodstock, Carleton County, to St. Andrews and St. Stephen, in Charlotte County, and crosses the Saint John and Maine Railway at McAdam Junction.

The New Brunswick Railway starts at Gibson, on the North-east side of the River Saint John, opposite Fredericton, and runs to Edmundston in Madawaska County. It has a branch running into Woodstock from Woodstock Junction, and another running from the mouth of the Tobique River to Caribou, in the State of Maine.

The St. Martins' and Upham Railway runs from Hampton Station, Intercolonial Railway, to Quaco, on the shore of the Bay of Fundy, in Saint John County.

Other lines are in course of construction, but not yet completed.

An idea of the Railway facilities of the Province may be thus summarized :—A traveller may leave Edmundston, in the North-Western portion of the Province, travel South and East to Fredericton, South and East to Saint John, East, North and West to Campbellton or Dalhousie, in Restigouche County, thus making an almost entire circuit of the Province, and within about forty hours of the time of starting

AGRICULTURAL PRODUCTS.

The soil of New Brunswick is capable of producing great quantities of grain and fruits, as well as root crops. Hay is grown in abundance on the "intervales" or low lands, and the yield on the high lands is from one to three tons per acre. Wheat, oats, buckwheat, rye, barley and flax grow well in the country. Potatoes, turnips, beets, carrots, parsnips, celery, lettuce, cabbage, cucumbers, pumpkins, squashes, etc., thrive in all parts. Apples, plums, cherries, goose-berries and currants are the common fruit crops, but strawberries, and raspberries are also common.

Hamilton.

Business continues brisk in the city. The cold wave of last week interfered considerably with contractors who had not quite finished their outside work, which, however, is generally about completed. Some fine buildings have been erected this season—one of the best—the Hamilton Provident and Loan, has been built by Mr. Robert Chisholm, who, has maintained in the style and finish of this building, his former reputation as a reliable contractor. The building is faced with Ohio freestone, and the sculpture and mouldings are of the best workmanship. Two columns of polished Canadian red granite, 13 feet high and twenty inches in diameter ornament the main entrance, and support the "royal arms," which are beautifully sculptured. The wood work is of the best description and expensive, as the walnut used cost from $100 to $110 per M, and the butternut from $25 to $30 per M. Machine shops and foundries have plenty of work in hand as may be seen from the following, which is ordered and under construction in the works of J. H. Killey & Co. : Steam road roller, 18 tons, for Brockville, Ont.; stone breaker, 8 tons, for same place; 40 horse-power engine, boiler and machinery for the new cotton factory, Hamilton; also finishing engine, boiler, machinery and elevator for the same; one 30 horse power engine, boiler and machinery for Winnipeg, Manitoba; one 40 horse power engine, Stephens, Turner & Burns, London; one 65 horse power engine for Mr. Fenwick's Mills, Exeter; one large new steam machine for the extension of Messrs. Campbell's sewer pipe factory, the machine will weigh five tons; new mill machinery for Bow Park farm; four steam blast apparatus for burning inferior fuel; one 25 horse power boiler for Law & Co.'s tannery, Port Dover; engine and shafting for Mr. Fearman's new factory, Hamilton.

Muskoka.

On the 1st inst., Wm. Robinson, employed in Dollar's lumber camp, Brunel, met with an accident which resulted fatally. A falling pine struck a dry hemlock, which latter fell at right angles to the pine, striking Robinson, who had believed himself to have been at a safe distance. The thigh bone near the hip was crushed, and internal injuries sustained, from which he died a few hours after.

Considerable interest has been taken in the case of Isaac Cockburn vs. M. Brennan, tried recently at the Barrie Assizes. Peter Cockburn obtained from defendant by deed all the pine timber on lot 1, con. 6, Brunel Township, Muskoka, that would make saw logs and merchantable dressed timber, and it was covenanted that he should have access to the land to cut the timber for four years from 1876. Peter Cockburn conveyed the same to John Donaldson who transferred his interest to the plaintiff. Defendant, however, resold the timber to a third peron, by whom the same was removed. The plaintiff accordingly sued for $500. The Judge assessed the damages at $318.

—Up to 24th Nov. Halifax had subscribed $3,200 and Montreal $4,000 for the relief of the Stellarton mine sufferers.

HON. WM. McMASTER.

Honourable in More Than the Mere Name.

A PRINCE AMONG MERCHANTS.

The Result of Industry, Energy, and Uprightness.

SUCCESSFUL IN BUSINESS.

A Farsighted Financier and Good Citizen—A Life Crowned with Good Works.

(From the Toronto Truth.)

Among the merchant princes of Canada, the Hon. William McMaster occupies a foremost place, and the simple record of his life may well read a lesson to all young men and encourage them in a course of well-doing. There has been nothing very extraordinary in Mr. McMaster's history, just as there is nothing overshadowingly great in his original powers of mind, or anything out of the common in his very successful and honourable career. No young man need say that the circumstances of Mr. McMaster's lot were so exceptionally favourable, or that his abilities were so entirely above the ordinary that few could hope to follow in his steps, or to look for anything like his splendid commercial success. On the contrary, there is nothing about the Honourable Senator's character, acquirements and prosperity which might discourage the young and aspiring; but something very much the reverse. Mr. McMaster

HAD TO PUSH HIS WAY

with few advantages. No extraordinary help and no exceptionally lucky turns of fortune. It could not be said that he owed anything to what some would call a mere fortunate chance, or that he took advantage of some special opportunity which, if once neglected would never again have presented itself. The secret of his success has been in steady, energetic work, prudent management and skilful attention to all the minute details of business. He has left nothing to chance, has never depended on something turning up, or reckoned upon others going out of their way to help him when he knew that he could help himself. Prudence, tact, energy and skilful management account for all that he has accomplished.

NOT FORGETTING THE BLESSING OF GOD,

which he would himself be the first to acknowledge, and to which he would be the readiest to ascribe all he is and all he has achieved.

A native of Ireland, where he was born in 1811, Mr. McMaster came to Canada when twenty-two years of age, and immediately set himself to the work which he has ever since so successfully prosecuted. His educational advantages had not been very many or very great, but he had made the best and most of them, and, full of youthful energy and hopefulness he entered upon commercial work,

RESOLVED TO SUCCEED,

but only by legitimate means, and in regular honourable undertakings. He was at first engaged as clerk in a dry goods store on King, nearly opposite Toronto street, but he could not long remain in that position. Within a year after his settling in Toronto he had become

A PARTNER IN THE CONCERN,

and very shortly after, had started as a wholesale merchant on his own account. At first, of course, he had very considerable difficulties to contend with. Montreal was the great distributing centre for Canada, and continued to be so for many years after. The merchants there had all the advantage arising from an established trade and settled business facilities, and it is not saying too much to add that they looked with no favourable eye upon any such attempts as that of Mr. McMaster which aimed at making Toronto, not Montreal, the great wholesale centre for the West of Canada. The covert jealousy and keen competition of Montreal, however, only stimulated a man like Mr. McMaster to greater exertion and made him the more

DETERMINED TO SUCCEED AT ALL HAZARDS.

He turned the peculiar advantages of Toronto to the best account; made it worth while for the merchants of the West to deal with him, and soon established a large and even growing connection, which for many years, first under himself and thereafter under his nephews, whom he had taken into partnership and who have carried on the business since he retired, has been among the largest and best known in all the Province of Ontario if not in the whole of Canada.

Very homely yet not so very common instrumentalities have been employed to build up and maintain the large and lucrative business. They may be all summued up in fair dealing, prudent management, untiring energy, courteous conduct and watchful attention to the smallest details. Mr. McMaster has never had any faith in sharp practice, questionable pretences or more than questionable make-believes. He established a character for fair, honourable dealing, kept the best of goods, gave the best terms which were prudently possible, and watched every opportunity for honourably pushing his business and profiting by the changing chances of the market. His customers learned to rely upon him. His name rose for

UPRIGHT AND HONORABLE DEALING,

and, within a comparatively short time his transactions extended over the whole country, and were, as such transactions ought always to be, mutually advantageous to all concerned. What the firm was, in the days when Mr. McMaster was at its head, it still continues to be, occupying to this day a foremost place among the many establishments of this kind now to be found in Toronto, and is, we believe doing if not the very largest business in its particular department, one of the safest and most lucrative.

A man of Mr. McMaster's energy could not remain idle, even after he had no special call to exertion. It is now many years since he entirely retired from the Dry Goods business and found himself so far, a gentleman at large. Instead, however, of his business life closing when a respectable competency had been secured, it may be said that it only then really commenced. He has since made himself a still greater name and power in the realm of Finance, than ever he was in that of Commerce. As director of various banks and other monetary institutions he has shown

THE SAME SOUNDNESS OF JUDGMENT

and caution, combined with enterprise, which gave him success in his original occupation. No undertaking with which he has been connected, has failed to reap large and satisfactory benefits from his wise and careful administration. But it has been in connection with the Bank of Commerce that his peculiar abilities have had chief scope, and have achieved their greatest success. That large and flourishing enterprise, may be said to owe almost all its prosperity to the untiring attention, admirable business habits, enlarged experience, and keen discernment of its President. It has been his favourite work, and he has reaped special celebrity and profit from his connection with it from the beginning. Indeed, there is no institution in Canada,—we had almost said —or on the Continent, whose history and success are so intimately connected with one man's name, and which are known so generally as having become what they are through the skilful management and undomitable energy of a solitary individual.

The Bank of Commerce will not go down when Mr. McMaster dies, but it is safe to say, that, but for him, it would never have occupied the position of prominence and power which it holds at present.

But it is not merely—we had almost said not chiefly—upon his success as a business man, that Mr. McMaster's wide spread reputation throughout the Dominion, rests. He has never been a very ardent or prominent politician, though, in the course he has followed as such, he has always displayed the same sound judgment, and unimpeachable integrity. As a public spirited citizen, however, an ardent christian, and an enlightened philanthropist, Mr. McMaster is most widely and most favourably known.

He has in many different ways sought the good of the land in which he lives, and in which he has achieved his great success. Toronto has benefited in many respects from his labours, and the religions denomination of which he is a member has long received from him munificent and and sustained assistance in all its varied enterprises for the advancement of the cause of Christ. What he did in connection with the building of

JARVIS STREET BAPTIST CHURCH

is well known. We should suppose that forty or fifty thousand dollars would not fully represent all he gave in money alone, besides the trouble and personal effort he cheerfully expended in the course of the work. His efforts for the upbuilding of the Literary Institute at Woodstock have been on a similar scale of enlightened munificence, while his last undertaking in erecting the splendid buildings in the Queen's Park for the Baptist Theological Seminary, and, in so far endowing it, also will likely throw all his previous efforts into the shade. It is well that Canada has such men,—men who have abundance of means and at the same time hearts to use them for

HIGH AND PERMANENTLY USEFUL PURPOSES,

men who do not hold on to their gold with death-like tenacity till the great king of terrors makes them unloose their grasp, but who take pleasure in so far being their own executors and in having the joy of seeing in their life time the blessed fruits of their wise arrangements and unstinted liberality. The amount of happiness which Mr. McMaster must derive from such undertakings cannot but be very great, and such as, if that were allowable in any case, onlookers might well regard with something like envy. What a contrast in every respect his career and his reward, even in mere personal pleasure, compared with what those can have who give themselves up to mere selfish accumulation, and who give way to that kind of pride, which one has said, "raises the loudest laugh in hell,' the pride of dying rich. Mr. McMaster is a modest as well as a wealthy man, and can ill stand to have his good deeds blazoned before the public. He is one, however, whom his fellow citizens delight to honour, and whom young men may safely copy. He is not a man of genius, and cannot even be said to be a man of any very distinguished abilities. But he has great good sense, large practical wisdom, indomitable perseverance, shrewd discernment of character, unswerving integrity and genuine,

UNOSTENTATIOUS PIETY.

No one envies him his success for he bears himself with modesty and uses his wealth for high and honourable purposes. That he may be long spared in a green old age to enjoy the fruit of his labours, to devise liberal things for the good of the race, and to still further help forward the cause of truth and righteousness on the earth, is the cordial wish not only of TRUTH, but of all to whom the interests of *the truth* are dear. The accumulation of a very large amount of property in the hands of single individuals is not at all a desirable thing, though it is not easy to see how it is to be prevented so long as some are industrious and shrewd, and others are improvident and wasteful, as well as idle and foolish. But if there were more of those generally spoken of as successful, who would follow a course somewhat similar to that of Mr. McMaster, their prosperity would be less envied, and their meaner characteristics less remarked upon. We have in this new country not many who could, if they were willing, expend their means on such a scale of princely munificence as Mr. McMaster has done, and is doing. We have still fewer who are willing to do this, even though they could. That the number of such will increase we sincerely hope, and that all of them will receive as much honour and derive as much unalloyed pleasure as Mr. McMaster has done we most fully believe. The great heart of the people is after all not very far from being just. It is true now, as it always has been, that if a man will only persist in doing what is right and fair and true, right will continually be done to him in return.

Kings in Exile.

The Duc d'Aoste, the whilom King of Spain, is staying at Venice, where he delights the boatmen and fishermen of the Lido by his wondrous performances as a swimmer. They say he is the most accomplished master of the art in Europe, excelling most particularly as a diver. He now and then astonishes the gondoliers by throwing into a gondola the broad straw hat he always wears to shield his face from the sun, as he lies upon the surface of the water; then, diving below, comes out on the other side, snatches the hat, places it on his head again, and remains stiff and motionless as before. The ex-King and Queen of Naples are staying at Benzeval, in Normandy, living the most quiet and unobtrusive life possible. The Queen, who possesses the same love of riding on horseback as her sister, may been seen in the early morning cantering along the sands on one of the ponies belonging to the place, without any other attendance than that of a lady friend who has accompanied her majesty throughout all her troubles and misfortunes. The Queen still preserves her youthful appearance, and the beauty which once formed the theme of many a Neapolitan *improvisatore's* spontaneous effusions as she passed through the streets of Naples. The King, on the contrary, has grown stout and heavy, moves with difficulty, and remains all day seated on the *plage*, content to breathe the sea air, and evidently enjoying the quiet of the place; sometimes he strolls along the public walk, leaning heavily on his cane, and supported on the arm of his friend, the Count de la Torre, but he seldom takes a drive beyond the limits of Benezeval, and never rides on horseback.

The crisis in Ireland may issue, at any moment, in bloodshed. It is nonsense to say that it will end in civil war. It will do nothing of the kind. It is terrible to think how unreasonable and absurd some people can be. What possible claim can the tenant farmers of Ireland have, to be made owners in fee simple of their different holdings, and that at the expense either of the present landlords, or of the general public of the three Kingdoms; while the first thing to be done by the new race of land owners, is to cut Ireland adrift from those who have paid the heavy end of the purchase money, and allow them not even consideration for the liberality they have shown? It seems funnily absurd. And what right has a man that ploughs to be made a freeholder, any more than a man that smites the anvil, or a woman that spins? And then to think that when they have got a Government that is pledged to, and eager for legislative amelioration all round these pig-headed fellows should by the grand rows they are kicking up, making it impossible for that very Government to look at measures of reform as long as it has to strain every nerve in the first place for the maintainance of the peace. If it were not to be thought offensive, TRUTH would say that it was immensely Irish all over.

QUEER HAPPENINGS.

COWS AS A STORM GUAGE—SPIDERS FOR COMPANIONS—A MIGHTY QUEER WATERMELON.

THERE is a young mother in Portland, Oregon, whose age is but 12, weight 85, yet her infant son weighed nine pounds at its birth.

A LARGE bird at Keokuk, Iowa, darted swiftly downward in its flight, and striking a lightning rod, the iron run through its body, and it remained impaled, fluttering and struggling until death came.

A WOMAN in Marshall County, Kansas, who is enjoying her fifth husband, lost her first two by hanging through vigilance committees, a third was sent to the penitentiary, and the fourth committed suicide.

As Jared Dingman was shaking $1,500 in gold under the nose of a steam tug owner in the Detroit river, endeavouring to tempt him to take that amount for his boat, the tug struck a steamer and the glittering gold was the property of the fishes.

A WISCONSIN cow with a persistent cough that baffled the skill of a veterinary surgeon to cure, died, and upon opening her windpipe to discover the cause of the irritation there was found in the upper part of the lung a live striped frog of ordinary size.

ELEVEN children at four births was the feat of Mrs. Scannel Hickson of Shamrock, Mo. First birth, three; second and third, two each, and at the last interesting occasion there were four, all the latter being alive and doing well. Ten out of the eleven are alive.

IN Richmond, Va., an old coloured woman has been going to the depot daily for many years to meet the incoming trains, looking for a letter containing $25. After the war she did the washing for a soldier, and when he went away he declared that he would return and bring the money or send it in a letter.

AN event probably without precedent in railway annals has just happened at Provins. A passenger train leaving Paris at 8:20 p.m., arrived safely at its destination, but on getting down to let the passengers out of the cars, the guard was astonished to find neither passengers nor passenger cars on at Paris.

WHILE riding horseback, John Eller of Alden, Iowa, saw coming from the sky a ball of fire, apparently about the size of a flour barrel. He was paralyzed with fear, and saw the globe strike the head of the animal he rode, when he fainted. Upon coming to his senses he found that the horse was dead, the head of the animal being seared as if by a red-hot iron.

THE queerest companions for a man are those of an old man in New Orleans. He has a mania for spiders and in his rooms are more than 500 of every shape and colour. The ceilings are hidden by the webs that they have spun. Occasionally the old man throws a handful of flies into the webs, and is greatly delighted at seeing the spiders seize their struggling victims.

AN aged and wealthy Milwaukee widower found a wife by a queer method. In a coffee-grinding mill in Chicago a female packer placed in several bundles of coffee a card saying that any gentleman matrimonially inclined might address her. This widower found the card while preparing his lonely breakfast after a quarrel with his housekeeper, and now the Chicago girl is Mrs. ——.

AN Italian fisherman recently discovered a petrified woman at Cascad Lake, Nevada. He was going out to fish, and when pushing off his boat, struck his oar against something which attracted his attention. Upon investigation a petrified hand protruded from the sand on the beach. In a short time he had unearthed a woman in a complete state of petrification. It was small in size, brown in colour, scrawny and emaciated.

NEAR the camp of the workmen on the new toll road, near Yankee Forks, Nevada, quite a curiosity was recently found. It was a mountain ram's head deeply imbedded in a pine tree, and about six feet from the ground. The right horn is outside, and curls partly around the tree, while the front of the skull and most of the left horn is covered with the growth of wood. The tree is a thrifty pine, fifteen inches through. How that ram's head came there will always be a mystery to scientists.

About midnight, just after the accident in the Consolidated Imperial Mine, Nevada, the wife of Matthew Winnie was found on her way to the works. She said she had been awakened just before by her husband, who came all mangled to her and told her that he had been killed in the mine. She got up, dressed herself, and started to ascertain the truth of what she was only too well convinced was true. There had in reality been a fearful accident; Mr. Winnie was indeed killed, and the trembling woman went back to her children and her desolate home.

As John B. Coyner, a farmer residing near Palestine, Ind., was watering nine cows at a pump trough, recently, they made a stampede down the lane as fast as their legs would carry them. The cause of this sudden freak was a mystery to the hired man, but it was not long before he was let into what appeared to be the secret of the stampede. Suddenly, although the sky was clear and the atmosphere still, a young cyclone, not over twenty feet in breadth, darted down the sky, and, striking the earth near the pump, twisted off five large beech trees as though they were weeds.

IN Lincoln County, Nev., there is a spring of ice-cold water that bubbles up over a rock and disappears on the other side, and no one has been able to find where the water goes. At another point in the same county is a large spring, about twenty feet square, that is apparently only some eighteen inches deep, with a sandy bottom. The sand can be plainly seen, but on looking closer it is perceived that this sand is in a perpetual state of unrest, and no bottom has ever been found. It is said that a teamster, on reaching this spring one day, deceived by its apparent shallowness, concluded to soak one of his wagon wheels to cure the looseness of its tire. He took it off and rolled it into the, as he thought, shallow water. He never laid his eyes on that wagon wheel again.

The Rights of an Organist.

The question as to the exact status of the organist, of his rights and wrongs, and of his privileges and duties, has often given rise to discussions, says a writer in the *London Opinion*. What with clergymen who know nothing of music, but who unfortunately think that they do, and members of the congregation eager to give advice which they have not tested, the seat in front of the keyboard is not always too comfortable. As a case in point, and as further illustrating our remarks, we are informed that at a dissenting place of worship not a hundred miles from Liverpool, the other Sunday evening, a member of the congregation—himself a professor of music and an organist—was invited to fill the position of the regular organist, who was absent. All seemed to go most satisfactorily until the last hymn, before the reading of which the minister publicly expressed a wish that the hymn might be sung softly, and "with but little strength of organ." The organist, exhibiting the courtesy of a gentleman, bent to the request of the worthy clergyman; but after the service this ill-advised and injudicious public remark was severely commented upon by the congregation. As a rule, the clergy know very little about organ-playing, although they not unfrequently assume a knowledge which is not warranted by facts. We shall next hear of the selection of stops being taken out of the organist's hands.

Mining Operations in Great Britain

The report of the Inspector General of Mines in Great Britain for 1879 has just been published. The number of persons engaged in mining operations in the United Kingdom was 523,870. The total number of serious accidents amounted to 843, and the total of deaths resulting 1,037, a diminution as compared with 1878 of 39 in the number of accidents and 453 in the number of deaths. There was an average of one accident for every 621 persons employed, and a death for every 505 persons.

In the twelve districts under the Regulation Act of 1872, for the coal mines 476,810 persons were employed in or about the mines of whom 385,178 were below the surface, and 91,631 above; of those above 4,842 were women.

The products of the mines for the year were: 133, 720,393 tons of coal; 9,387,766 tons of iron ore; 1,455,003 tons of potter's clay; and 803,207 tons of mica. The amount of coal produced was 1,108,330 tons more than in 1878, while the other items were less by the following amounts: iron ore 1,359,461 tons; potter's clay, 170,583 tons; and mica, 10,055 tons.

Some Homœopathy.

[Appleton's Journal.]

In the discussion between a "skeptic" and a "believer" in infinitesimal doses, it was discovered that a drop of mother-tincture put through thirty decimal dilutions would require for the purpose the contents of nearly 16 quadrillion reservoirs of the capacity of that in Central Park. Inasmuch as it is simply impossible for the human mind to grasp a number so large as this, it would have been well had an effort been made to express the amount of liquid required in larger bulks with fewer numerals. One of the speakers asks if there can "be so much fresh water on the continent," which is proof of the little idea he entertained of the amount of water that such a number of reservoirs would contain. Let us see what can be done to make more obvious what those figures really mean. We do not know the area of the Central Park reservoir, but by consulting the map we find that it is half a mile in extent in one direction, a little less in the other, and that it tapers somewhat toward one end. If we estimate, therefore, that a sqaare mile would contain five such reservoirs, we are pretty close to the facts—sufficiently so for our present purpose. The geographers estimate the entire surface of the world to be about two hundred millions of square miles. The surface of the world is then capable of containing one billion of our reservoirs. But we want space for 15,873,015,873,015,873 reservoirs, and to hold this number it will be found that we should absolutely require 15,873,015 worlds and a fraction. The Croton Reservoir, however, is comparatively shallow, perhaps not more than 50 or 60 feet deep—let us say fifty feet. Now, if we deepen our billion reservoirs, standing on the surface of the globe, until they extend downward to the centre, becoming, say, 4,000 miles deep, which is about one-half the diameter of the earth at the equator, we shall increase their capacity some four hundred and twenty two thousand times (that is, we should do so if their area were uniformly maintained,) so that, if the world were composed wholly of water, it would require, at the very least, roughly calculated, more than forty such worlds in order to obtain one nonillion drops of water; that is, to put the mother-tincture through 30 decimal dilutions. If the world were a cube instead of a sphere, a tolerably exact calculation could be given; it would then require nearly 38 worlds of water; as it is, if we say 45 we shall understate the number, but a few worlds of water more or less are of no moment. Now, it must be remembered that for every dilution we must multiply the preceding number by ten. It would thus require 450 worlds of water for the thirty-first dilution; 4,500 for the thirty-second, and so on, the fortieth dilution needing 450,000,000,000 worlds of water! If the 20,000,000 stars which the great telescopes reveal in the heavens were all composed of liquid, they would not nearly supply water enough, unless averaging 22,500 times larger than our world, to put one drop of tincture through 40 dilutions—and yet people are constantly cured by doses of the one-hundredth dilution.

Preserving Timber in Ground.

In speaking of the well known methods of preserving posts and wood which are partly embedded in the earth, by charring and coating with tar, it is said these methods are only effective when both are applied. Should the poles only be charred without the subsequent treatment with tar, the charcoal formation on the surface would only act as an absorber of the moisture, and, if anything, only hasten the decay. By applying a coating of tar without previously charring, the tar would only form a casing about the wood, nor would it penetrate to the depths which the absorbing properties of the charcoal surface would insure. Wood that is exposed to the action of water or let into the ground should first be charred, and then, before it has entirely cooled, be treated with tar till the wood is thoroughly impregnated. The acetic acid and oils contained in the tar are evaporated by the heat, and only the resin left behind, which penetrates the pores of the wood and forms an air-tight and waterproof envelope. It is important to impregnate the poles a little above the line of exposure, for here it is that the action of decay effects the wood first, and where the break always occurs when removed from the earth or strained in testing.

A light affair—a lamp.

GRINS.

A GOOD thing to re-collect, if you can—debts.

IT don't take a very fast horse to catch epizootic.

A POOR rider always has an eye on the mane chance.

THE writing-master usually does a flourishing business.

A FRIEND asks us what a whale says when he spouts. He tells some kind of a fish story, probably.

WHY is the discovery of the north pole like illicit whisky manufacture? Because it's a secret still.

THERE is romance in figures. A young man met a girl, 1er, married her, and took her on a wedding 2er.

A WAG suggests that a suitable opening for many choirs would be: "O, Lord, have mercy on us miserable singers."

PEOPLE who take moonlight strolls on railroad tracks shouldn't be offended if the coroner doesn't recognize them.

WHEN a dog gets his head fastened in a fence it is unsafe to extricate him unless you enjoy the pleasure of his acquaintance.

"CIRCUMSTANCES alter cases," said an unsuccessful lawyer, "and I wish I could get hold of some cases that would alter my circumstances."

AN instance of Dr. McCosh's shrewdness is given in *The Princetonian*: Student after class. "Did you mark me absent, doctor?" "I did, sir; and what's your name?"

VAGARIES of fashion:

When lovely woman is not jolly
But hides some secret grief within,
What art can cure her melancholy?
Seal's kin.

"MY son," said an American father, "how could you marry an Irish girl?" "Why, father," said the son, "I'm not able to keep two women, and if I'd marry a Yankee girl I'd have to hire an Irish girl to take care of her."

THE Detroit *Free Press* man thinks kissing pretty girls must be frowned down. He'll find that it takes a pretty powerful frown to stop it., and we doubt if he won't have to sail in with a club besides, to successfully interrupt the fun.

AN English doctor says that people troubled with heart disease are more likely to die at midnight than any other time, especially if they are sound sleepers. Get up and shake down the coal stove at 11:45 and you'll be all right.

The New York *Graphic* says the Bernhardt went to the Italian opera and entered quietly, which won her many friends. Did the *Graphic* expect she would go to the theatre headed by a brass band and a torchlight procession?

Apropos to the discussion of sense-perception:

The pharynx now goes up
The larynx with a slam
Ejects a note
From out the throat
Pushed by the Diaphragm.

"How are you Brown? Haven't seen you for an age." "No, we haven't met for months. By-the-way you've lost your wife since I saw you last. Very sorry. Terrible blow for you!"; "Yes; very sad, wasn't it? I can scarcely realize at times that I'm married again!"

DOM PEDRO, Emperor of Brazil, wished to test a certain railroad brake. He had one adjusted to a car, and started off for a trial trip. The engineer soon saw what seemed to be a big rock on the track ahead, and applied the brake, stopping the train within a few feet of the obstacle, which proved to be pasteboard.

A Jersey, like a coat of mail,
The shapely form incases,
And to a daints waist can't fail
To add developed graces;
To draw it on requires a knack
Quite easy to attain,
But what a business 'tis, good lack,
To get it off again!

"DISTURBANCE!"—Country banker to shakey customer: "Are you aware, Mr. Soolivan, that your account is overdrawn a hundred or so?" Soolivan: "Certainly I am, sir. Don't bother me about such thrifles! I don't go howling about the country when you've a hundred or so of mine! Your information is superfluous either way! Good morning, sir!"

MARKET REPORTS

CANADA LUMBERMAN OFFICE,
TORONTO, 27th Nov., 1880.

Owing to the continued cold and stormy weather but little progress has been made in exporting lumber for the past two weeks. There are some three or four cargoes yet to ship, which must remain over until spring, unless a favourable change of weather should set in. The Toronto Bay is partly frozen over, and tugs find it hard to force their way through. Lakes Couchiching and Scugog have been frozen over a week ago. The Muskoka Lakes, although farther north, are open, but the steamers have now ceased running. The Grand Trunk have advanced freight rates to all parts of the Dominion. The Lumberman's *Gazette*, Bay City, of Nov. 22, says :—"Mills have all shut down. Winter took a snap judgment on nearly everybody, and nearly all have suffered more or less. There is quite an amount of lumber left on the docks. Trade for a time will remain at a standstill. Business is expected to be quite brisk by rail and dealers are looking forward to a good trade." Our home market prices remain unchanged, and Hamilton and Toronto prices range about alike. At Quebec there is little change, as will be seen on reference to our correspondent's letter. From Chatham, New Brunswick, our correspondent writes, "Our fleet of sea going vessels is now reduced to 6 and as there is no likelihood of more arrivals this fall our several mill wharves will soon assume their winter inactivity.

WHOLESALE RATES.

Mill culls	$ 5 50	@	7 00
Shipping cull stocks	10 00	@	11 00
Shipping culls, (in. box,)	8 50	@	10 00
Dressing inch,	11 50	@	13 00
Flooring, 1¼ & 1½ in,	12 00	@	13 00
Joisting and scantling,	9 50	@	10 50
Mill run sidings	12 00	@	14 00
Pickings	17 00	@	20 00
Clear and pickings	25 00	@	28 00
Lath	1 25	@	1 40
Shingles, No. 1	2 10	@	2 20
No. 2	1 40	@	1 60

LONDON, ONT.

Common Lumber	$10 00	@	12 00
Stock boards	13 00	@	15 00
Clear in. and 1½ to 2 in.	25 00	@	30 00
Bill stuff, up to 16 feet		@	13 00
over 16	13 00	@	14 00
Lath, per 1000 feet		@	4 00
Shingles No, 2, per M.		@	2 65
per square		@	1 90

OTTAWA.

The following are quotations in the Ottawa market :—

12 in. stocks, good	$18 00	@	20 00
12 " S. culls	10 00	@	10 50
10 " good	16 00	@	18 00
10 " S. culls	9 50	@	10 50
Strips, good	17 00	@	20 00
" culls	6 50	@	7 50
Sidings, 1¼, 1½, and 2 in., good	23 90	@	26 00
" " culls	9 00	@	10 00
Lath (₱ 1,000 pcs.)	0 00	@	1 00
Deals (₱ Quebec standard) 1st	0 00	@	110 00
Deals (₱ Quebec standard) 2nd	0 00	@	65 00
Deals (₱ Quebec standard) 3rd	0 00	@	58 50
Cull deals (₱ M. ft.)	6 50	@	8 59

FREIGHT.

To Montreal, $1.15 ; Quebec, $2 ; Burlington, $2 ; Whitehall, $1.25 ; Albany, $3.50 ; New York, $4.

OSWEGO, N. Y.

Three uppers	$38 00	@	40 00
Pickings	28 00	@	30 00
Pine, common	20 00	@	22 00
Common	14 00	@	16 00
Culls	12 00	@	14 00
Mill run lots	16 00	@	20 00
Sidings, selected, 1 inch	28 00	@	32 00
1¼ inch	28 00	@	35 00
Mill run, 1x10, 13 to 16 feet	16 00	@	20 00
Selected	20 00	@	25 00
shippers	15 00	@	16 00
Mill run, 1 and 1¼ in. strips	15 00	@	18 00
Culls, selected	20 00	@	24 00
1x6 selected for clapboards	24 00	@	35 00
Shingles, XXX, 18-in. pine	3 00	@	3 50
XXX, 18-in. cedar	3 00	@	3 10
Lath	1 50	@	1 75

BUFFALO.

We quote cargo lots :

Uppers	$35 00	@	40 00
Common	16 00	@	19 00
Culls	11 00	@	12 00

Assorted lumber in car lots or boat loads :

3 uppers 1 inch	$	@	40 00
Do. 1¼ and 1½ in	40 00	@	42 00
Do. 2 in	45 00	@	47 00
Do. 2½, 3 and 4 in. special			
Pickings 1 inch	28 00	@	30 00
" 1¼ and 1½ in	33 00	@	35 00
" 2, 3, and 4 in., special	22 00	@	00 00
Shelving	22 00	@	24 00
Cutting up	22 00	@	24 00
Sidings, com., 1 in	16 50	@	17 00
" 1¼ in. and over	17 00	@	20 00
Common, stocks	16 50	@	17 00
Box, all thicknesses	13 00	@	14 00
18 in XXX shingles	3 60	@	3 70
18 inch clear butts	2 60	@	2 70
Lath	1 75	@	1 80

We quote wholesale prices of hardwood lumber, delivered on cars or boat :

Walnut ½ inch clear	$65 00
⅝ inch, 1sts and 2nds	70 00
¾ inch, 1sts and 2nds, 14 feet coffin stock	73 00
1 inch 1sts and 2nds	75 00
1¼, 1½, 1¾, and 2 inch	77 00
2½ inch and thicker	80 00
counters	150 00
newels 5x5 to 10x10	95 00
common in. & thicker	55 00
culls, inch	35 00
culls, 1¼ inch	35 00
White ash, Ohio 1st and fine 2nds	35 00
Whitewood, inch	30 00
⅝ inch	28 00
¾ in coffin stock, 14 ft	30 00
square, 4x4 to 10x10	33 00
Chestnuts, 1sts and fine 2nds,	32 00
Maple	25 00
White oak, Ohio	35 00
Cherry, inch and thicker	55 00
Butternut	50 00
Hickory, best Ohio	35 00

CHICAGO.

YARD RATES.

First and second clear, 1@ 1¼ in	$43 00		
First and 2d clear, 2 in	45 00		
Third clear, 1¼ @ 2 in	38 00		
Third clear, 1 inch	38 00		
1st and 2d clear dressed siding	20 00		
1st com. dressed siding	19 50		
Second common	17 50		
Flooring, 1st com. dressed	34 00		
Flooring, 2d com. dressed	32 00		
Flooring, 3d com. dressed	24 00		
Box bds, A, 13 in. and up	43 00		
Box bds, B, 14 in. and up	37 00		
Box boards, C	25 00		
A stock boards, 10 @ 12 in., rough	37 00		
B stock bds, 10 @ 12 in	33 00		
C stock bds, 10 @ 12 in	27 00		
Common stock boards	17 00		
Cull boards	$10 00	@	11 00
Fencing, No. 1	13 50		
Fencing, No. 2	11 50		
Common boards	11 50	@	12 50
Dimension stuff	11 00		
Dimension stuff, 20 @ 30 ft	12 50	@	20 00
Small timber, 4 x 4 to 8 x 8	12 00		
Round posts, cedar	15 00		
Pickets, dressed and headed, flat	15 00		
Pickets, do., square	20 00		
Pickets, rough,	14 00		
Clear shingles	3 25		
Extra "A" shingles	2 65		
Standard "A" dry shingles	2 40		
Shaded "A" shingles	1 10		
No. 1 shingles	1 00		
Cedar shingles	2 25		
Lath, dry	2 50		

DETROIT.

Yard rates, continue as follows :

Uppers, all thicknesses	$40 00	@	45 09
Selects	35 00	@	38 00
Fine common, thick		@	30 00
No. 1 common stock, 1x12	16 00	@	18 00
Common shippers, 1x12	13 00	@	14 00
Flooring, select		@	25 00
common		@	22 00
Roofing, matched		@	16 00
Siding, clear		@	24 00
A select		@	20 00
B common		@	16 00
Ceiling, select		@	30 00
common		@	25 00
Shipping culls		@	12 00
Mill cull boards		@	10 00
Dimension or bill stuff to 16 feet		@	14 00
18 to 24 feet		@	15 00
longer than 24 feet	16 00	@	20 00
Shingles, clear, 18 inch		@	4 00
6 inch clear, 18 inch		@	2 75
Lath		@	2 25

ALBANY.

FREIGHTS.

To New York ₱ M. feet	$ 1 00
To Bridgeport	1 25
To New Haven	1 25
To Providence	2 00
To Pawtucket	2 25
To Norwalk	1 25
To Hartford	2 00
To Middletown	1 75
To New London	1 75
To Philadelphia	2 00

Quotations at the yards are as follows :

Pine, clear, ₱ M.	48@60
Pine, fourths	43@55
Pine, selects	38@45
Pine, good box	17@28
Pine, common box	14@17
Pine, 10 in. plank, each	38@42
Pine, 10-in. plank, culls	21@23
Pine boards, 10-in	25@28
Pine, 10-in boards, culls, each	17@18
Pine, 10-in. boards, 16 ft. ₱ M.	28 00
Pine, 12-in. boards, 16 ft	28 00
Pine 12-in. boards, 13 ft	28 00
Pine, 1¼ in., siding, select	42 00
Pine, 1¼-in. siding common	18 00
Pine, 1-in. siding, selected,	40 00
Pine, 1-in. siding, common	16 00
Spruce boards, each	16
Spruce, plank, 1¼-in., each	20
Spruce, plank, 2 in., each	30
Spruce, wall strips, each	11@11½
Hemlock, boards, each	13
Hemlock, joist, 4x6, each	30
Hemlock, wall strips, 2x4	9½
Black walnut, good, ₱ M	85 00
Black walnut, ⅝-in	78 00
Black walnut, ¾-in	78 00
Sycamore, 1-in	28 00
Sycamore, ⅝-in	22 00
White wood, 1 inch and thicker	40 00
White wood, ⅝ inch	30 00
Ash, good	43 00
Ash, second quality	30 00
Cherry, good	60 00
Cherry, common	35 00
Oak, good	42 00
Oak, second quality	25 00
Basswood	25 00
Hickory	40 00
Maple, Canada	30 00
Maple, American	28 00
Chestnut	40 00
Shingles, shaved, pine, m	6 00
" " 2d quality	4 50
Shingles, extra, sawed, pine	4 25
Shingles, clear, sawed, pine	3 25
Shingles, cedar, mixed	2 75
Shingles, hemlock	2 00
Lath, hemlock	1 50
Lath, spruce	2 00

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ROUGH LUMBER.

Uppers, thick	$45 00
inch	42 00
Box, thick	36 00
inch	32 00
2½, 3 and 4 in clears special	
Flooring strips, 6 in, No. 1	34 00
2	24 00
Fencing strips, 6-in, No. 1	16 00
No. 2	14 00
Select common, thick	28 00
inch	24 00
Common	15 00
Culls	12 00
B. bds No. 1 12 in	25 00
No 2	16 00
No	14 00
No 1 18 ft	20 00
No 2 18 ft	18 00
No. 3 18 ft	15 00
Bill stuff to 18 ft	13 00
Bill stuff over 18 ft. adds 75c to $1 per ft. per M.	
Shingles, XXX	3 60
clear butts	2 60
Lath	2 25
Surfacing one side adds to the price of rough lumber	1 00
2 sides	1 00
Norway bds and strips	18 00
common	13 00

DRESSED LUMBER.

Flooring and drop siding clear	$40 00
box	30 00
select com	28 00
commom	20 00
Siding, ½ in. bevel clear	00
box	20 00
select common	15 00

Working lumber matching flooring and drop siding, $2 ; working ½ in. siding, $4.

In a cave near Silver Cliff, Col., two bars of gold, worth $900, were found. Two human skeletons were there, too, and it is supposed they are the remains of very early miners.

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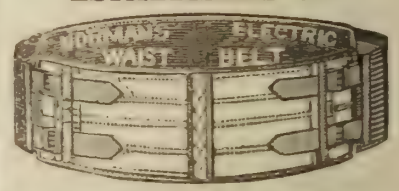

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CAUTION—As there are worthless imitations being sold under different names the public are cautioned against buying any but "Pim's Royal Printograph," as none but those bearing our name are genuine.

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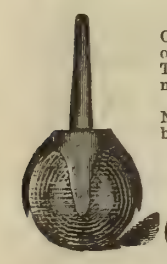

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IN PRESS—TO BE PUBLISHED IN JANUARY, 1881.

LOVELL'S

Gazetteer of British North America.

Containing the latest and most authentic descriptions of over 7,500 Cities, Towns and Villages in the Provinces of Ontario, Quebec, Nova Scotia, New Brunswick, Newfoundland, Prince Edward Island, Manitoba, British Columbia and the North-West Territories, and other general information, drawn from official sources, as to the names, locality, extent, ect., of over 1,800 Lakes and Rivers; a TABLE OF ROUTES, showing the proximity of the Railroad Stations, and Sea Lake and River Ports, to the Cities, Towns, Villages, etc., in the several Provinces, (this Table will be found invaluable); and a neat Coloured Map of the Dominion of Canada. Edited by P. A. Crossby, assisted by a corps of Writers. Subscribers' names respectfully solicited. Agents wanted. ☞PRICE $3—Payable on Delivery.

JOHN LOVELL & SON, Publishers.

Montreal, August, 1880.

PUBLIC NOTICE.

ALL PERSONS NOW SQUATTED upon any Public Lands within the Nipissing Crown Land Agency are hereby requested to apply without delay to John S. Searlett, Esquire, Crown Land Agent at Nipissing, and have their locations carried out in due form, failing which their claims cannot be recognized by the Department.

THOS. H. JOHNSON,
Assistant Commissioner.

Department of Crown Lands,
Toronto, 13th Oct., 1880.

DISSOLUTION OF PARTNERSHIP.

THE PARTNERSHIP HERETOFORE existing between GEO. BENGOUGH and WM. DINGMAN, as Machinery Brokers, has this day been dissolved by mutual consent. All accounts will be settled, and the business carried on by Geo. Bengough under the name and style of Wm. Dingman & Co.

GEO BENGOUGH,
WM. DINGMAN,

Witness: ED. E. KING.

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LOCOMOTIVE BOILERS,
and SHEET IRON WORK.

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WILLIS RUSSELL, Pres., Quebec.

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JAS. A. GOUIN, - - Proprietor.

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Favourite Resort of the Leading Public men of the Dominion attending the annual Sessions of Parliament.

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THE RUSSELL HOUSE being central, almost abutting on the magnificent PARLIAMENT and DEPARTMENTAL BUILDINGS—the pride of the Country—is thus conveniently situated for those visiting the City on public business. But the location is also everything that could be desired alike for the man of business and the man of pleasure. A few minutes walk brings the guest of the Hotel within reach, not only of all the principal business resorts, but also of the most splendid Mountain and Valley Scenery that can be seen anywhere, as also of the two almost unrivalled Waterfalls—the Chaudiere and Rideau—and of the extensive Manufacturing Establishments and Depots of the leading Lumbermen. But, besides the beautiful scenery, which, it may be mentioned, includes the magnificent Ottawa and two of its grand tributaries—the Rideau and the Gatineau—there are in the immediate neighborhood, beautiful Lakes and apparently never-ending woods, which afford opportunities for the finest Fishing and Shooting that can be obtained on the Continent.

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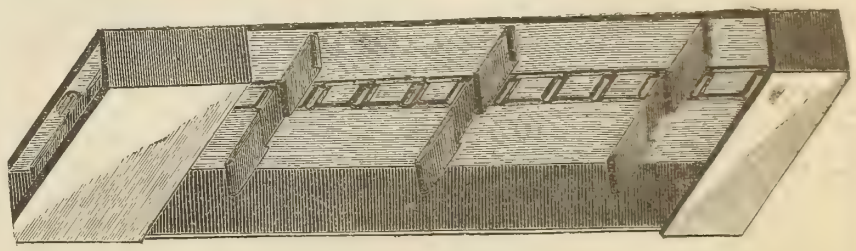

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HOTEL OTTAWA,

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Terms, $1.00 to $1.50 perday.

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Financial, Railway and Mining Journal.

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THE ECONOMIST IS DEVOTED exclusively to the Financial, Railway, and Mining Interests of the United States. It is the representative journal of its class in New England, and has, by its conservative and independent policy, established a reputation and circulation which give it a commanding influence in its section. It aims to advance and protect the legitimate mining industry, and to guard investors from imposition and consequent losses.

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Wm. MACKIE, Proprietor.

The Book Agent.

A SCHOOL FOR THE INSTRUCTION OF WILY CANVASSERS.

From the Cincinnati Gazette.)

Prince—"What is the book for which you canvass?"

Pupil—"The History of the Bible."

Prince—"What does it cost?"

Pupil—"Seven dollars and——."

Prince—"Naw!"

Pupil—"Two cents a day."

Prince—"Yes. How many numbers!"

Pupil—"Twenty-nine. Delivered every two weeks."

Prince—"How many numbers are ready for delivery, and when do you mention the fact?"

Pupil—"Four. After the subscription is taken."

Prince—"Good! Now, how will you carry your prospectus?"

Pupil—"I'll wrap it up in paper and keep it nice and clean."

Prince—"Naw! Clean! They ain't old enough looking. You start out, you see my friend, with a good subscription list already taken. You show it—you needn't say they were taken in Cincinnati—we are ladies and gentlemen—we never lie. Naw! You don't carry it rolled up in a paper or in a sack. You don't carry it in your hand or under your arm—you carry it here."

The Prince slipped it dexterously beneath the breast of his coat, snugly buttoned it in. "Naw! we are gentlemen and ladies on the street. I don't have any one else work for me, and you, miss, will put yours under your cloak. I had one lady who used to slip hers right under her bustle. Now you are going to call. How do you know Mrs. Rose is the lady of the house?"

Pupil—"Oh, I could find that out in the last house."

Prince—"Of course you could, and how many children she has, and what her husband does for a living, and you may get an inkling of what church she belongs to; but cautious, you know cautious. When you ring the bell and the servant comes to the door what would you say?"

First Pupil—"I would ask, is the lady of the house in?"

Prince—"Naw. What would you say?"

Second Pupil—"Is Mrs. Rose in?"

Psince—"Naw! She would tell you that Mrs. Rose is not in, and Mrs. Rose would hear her say so. They teach their servants to lie. Ladies and gentlemen, they all do it. What would you say, Miss?"

Third Pupil—"Be kind enough to tell Mrs. Rose that a lady wishes to see her,"

Prince—"Naw! That would be true, but not politic. The servant would tell you to call again when Mrs. Rose was in. You never would find Mrs. Rose. You would, sir, step into the hall, place your hat on the rack, say very coolly to the servant, 'Tell Mrs. Rose Mr. N. J. Hall wishes to speak with her;' then walk into the parlor and take a seat. The servant will be sure you are a gentleman and an old acquaintance. She will say, 'Yes, sir,' with a simper and a smile, and trot off up stairs without a word. Then if you listen you will hear them above:

"'Why, who in the world is N. J. Hall? I'm sure I don't remember him. Has he got anything with him?'"

"Now, if you had your book in your hand, eh?"

"No, mum; he hasn't got anything."

"She doesn't come and say: 'Mrs. Rose is indisposed to-day, sir,' or, 'Mrs. Rose is engaged.' A lie, you know, but it settles your hash. Naw! She doesn't, but if she is very suspicious the servant will come down and ask the nature of your business upon which you wish to see Mrs. Rose. Now, what would you tell her?"

Pupil—"I would tell her—tell her—I don't know what I should tell her, but I shouldn't tell my business."

Second pupil—"I should tell her that I would rather not mention my business to any one except Mrs. Rose."

Prince—"And she would send the servant down once more to tell you to call again. Naw! You would tell her that you had called upon a matter concerning the welfare of her children. Don't you see, they are at school; she doesn't know but that something very serious has happened or is about to happen—that will bring her every time. She'll come down stairs, if she happens to be a little nervous, with her heart in her mouth. She'll run to meet you. Now what would you say when she comes?"

Pupil—"Why, I should take out my prospectus and begin talking the book."

Prince—Naw! You wouldn't frighten her away; you wouldn't shove the book under her nose the first thing. You would engage her in conversation. You are a gentleman; she is a lady. You would bow politely. 'Mrs. Rose, I presume.' 'Yes, sir, I am Mrs. Rose.'" 'I have called on behalf of the children (mark you, the children, not your children, now). The country, madam, is flooded with dime novels, sensational stories, an unlimited amount of trash'—

'Yes, sir; but my children are not permitted to read such things.'

"'Very true, madam. Pardon me, I can readily see that you are a lady of too excellent judgment to permit it, if you know it; but the temptation is before them always. This literature perverts their emotions, ruins their morality, and sows the seed of religious skepticism,' etc. Then you can take out your book and show the beautiful pictures. 'Only two cents a day, madam; think of that. Purely nonsectarian, a grand effort to interest the children in the history of the Bible,' etc., etc. If there happens to be a young child in the room you can turn to this magnificent picture by Gustave Dore of Moses in the bullrushes, and remark upon the resemblance of the child to the youthful Moses, and then go on talking the pictures and the stories. Never ask her to subscribe; she'll do it when you've talked long enough.'

Attitude of the Clergy in Ireland.

Too much praise cannot be given to the Roman Catholic Clergy in unhappy Ireland for the bold stand they (or the majority of them) have taken against the suicidal action of the Land Leaguers. Archbishop McCabe in a recent pastoral strongly condemned the use of violence in obtaining redress of the grievances under which, beyond question, the people are labouring, and quoted the great O'Connell in support of his position. The great agitator—of whom (as was wittily said by Labouchere) Parnell is but a *papier mache* imitation—lost no opportunity of counselling the use of legal means to obtain what the people of Ireland craved, and he denounced in the most unsparing manner the use of the very means that Parnell is advocating with all his might. There is the truest wisdom in the policy adopted by the R. C. Clergy in this matter, for in a country where the hatred of the creeds runs so high, the most terrible results would inevitably follow if the movement became identified with Roman Catholicism. It would certainly result in a general uprising, both of Protestants and Catholics, and a repetition of the wholesale massacres that have already stained Ireland's history. In strong contrast to this policy on the part of Archbishop McCabe was the imprudence of Archbishop McClosky, of New York, who identified himself, to a certain extent, at least, with the Irish agitators who visited America, and was said thus to have incurred the anger of the supreme Pontiff. It remains to be seen how the prosecutions of the Parnell party will eventuate, but there is every indication on the part of the government of adopting the most vigorous repressive measures, and, when they are driven to that course, there can be but one issue—the quenching in the blood of poor misguided peasants of the flume that Parnell has so rashly kindled.

A WONDERFUL BLIND MAN.—A very remarkable blind man, named John Metcalf, a native of Manchester, was living at the beginning of this century; and, strange to say, his occupation was no other than that of a guide, his living being gained by his conducting strangers through intricate routes during the night or when the roads were covered with snow. Stranger still however was the calling which he subsequently followed, and this we are told was that of a "projector and surveyor of highways in difficult and mountainous parts." With the aid solely of a staff which he carried, he was often to be seen traversing roads, mountain hills, and exploring valleys. It was under the direction of Metcalf that many of the roads over the Peak in Derbyshire were altered; and he also designed and superintended the construction of a new road in the same neighbourhood, formed with a view to open a communication with the great London road without the necessity of passing over the mountains.

A LADY remained too long on a train to kiss a friend, and, trying to get off after it was started, was thrown violently on her face. "If ever I kiss anybody again!" said she vengefully, as she arose—"any woman, at least," the thoughtfully added.

A BUCKS COUNTY, Pennsylvania, man has just ended a lawsuit of forty-two years' standing, and recovered six cents damages.

PROMINENT PEOPLE

THE Czar has asthma, and it continues to get worse. He will not likely live long.

THE Prince of Wales has just gained $25,000 on the turf. It's turf on the other fellows.

Ex-King Amadeus is now on a tour in England, buying up horses for the royal stables of Italy.

WHILE a Leadville lawyer was cross-examining a woman who was in the witness-stand, she exclaimed: "I'm a lady, and, by thunder, don't you forget it."

SNOW has not been so deep in the far west at this early date for years before, and old settlers are arranging to put their whisky-jugs where they won't freeze.

COUNT Taaffe, the present leader of the Austrian Ministry, is by descent an Irishman, not a Welshman, as his name and the old nursery ballad might suggest.

THE ballad-singer sighs because "there are no birds in last year's nests." It is a great pity. The poet will next cry because there are no clams in last year's shells, no woodchucks in the old-time holes.

PATTI doesn't like Wales because the poachers kill rabbits on her estate and then have the audacity to sell them to her own servants. It only indicates a popular preference for Welsh rabbit over an Italian Patie.

In Russia, all the sons and daughters of princes inherit their title. They are consequently, as numerous as sparrows. It is said that there is a village where every inhabitant is a Prince or Princess Gallitzen. The title of Prince in Russia is about equivalent to that of Esquire in England.

IT is wonderful how short-lived is Parliamentary fame in England when the prominence it gives at the time is considered. Thirty years ago Col. Sibthorpe and Joseph Hume were names as familiar in the United Kingdom as Gladstone or Disraeli. To day not one man in a hundred knows who they were.

The Czar of Russia, like many of his subjects, has suffered greatly from a nervous affection of the eye, which threatens to become very serious. By the use of a simple remedy prescribed by his oculist some relief has been obtained. The remedy consists in throwing into the eye or upon the lids a tiny jet of water by means of the eye-fountain or douche. The delicate spray is both restful and invigorating to weak or weary eyes.

YOUNG King Alfonso is no sluggard. Up with dawn in winter and before seven in summer, he reads, and works, and holds his councils before noon. He reads foreign as well as Spanish papers, and receives daily the London *Times*, *Independance Belge*, *Les Debats*, and other journals. He likes to read English history, and says very bluntly that he would fain seek his models in countries like England, Italy and Belgium.

IT is reported that Lord Dufferin will shortly be appointed Ambassador at Constantinople. Mr. Goschen's health, never very robust, has been much impaired by the worries and anxieties inseparable from contact with Ottoman intrigue, and nothing but loyalty to duty prevented his return to England long ago. Lord Dufferin is not enamoured of St. Petersburg, though diplomatically a success there, and his nomination to the Pera appointment will give great satisfaction.

THE Prince of Wales and his duns are to become again the subject of British inquiry and legislation. One of the reigning sensations of London is the report that Mr. Gladstone has been requested by the queen to ask parliament for a grant of $200,000, to help the prince pay all such of his debts as are considered pressing, and for an addition of $50,000 a year to his royal highness' allowance, which would give him $200,000 a year, irrespective of the net revenues of the duchy of Cornwall, which amount to $350,000 annually, and the allowance of the princess, his wife, which is $50,000.

THERE is joy in Burmah, just now, for one of King Theebaw's consorts has quite recently presented that monarch with a son. Mother and child are doing well. The happy father is so elated by the achievement of his spouse, Su Huayah Lut, that he has announced his intention to wed her younger sister forthwith. As he has put to death nearly all his relatives having any claim to the succession, his Majesty cannot be too fervently congratulated upon the acquisition of an heir, from cutting whose throat he will probably be deterred by the feelings of a father and the interests of a dynasty.

PRINCE ALEXANDER, the present ruler of Bulgaria, having recently come into a legacy of a million and a half dollars left to him by the late Empress of Russia, his aunt by marriage, is about to build a splendid palace in the new quarter of Sofia, at the east end of that city, where several large and handsome houses are in course of erection for the future accommodation of Bulgarian rank and fashion. The youthful Hespodar is just now in a lucky vein. Only the other day Bishop Gligor presented him with a tastefully laid-out park, about half an hour's drive from Rustchuk, eminently suitable for a summer retreat; and the Prince, while gratefully accepting this munificent gift sagaciously seized the opportunity of adding to his popularity by forthwith issuing a decree in virtue of which the park in question is to be thrown open to the Bulgarian public during three hours of every day for all time to come.

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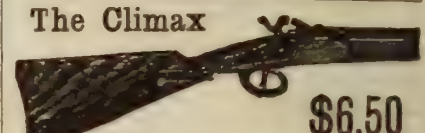

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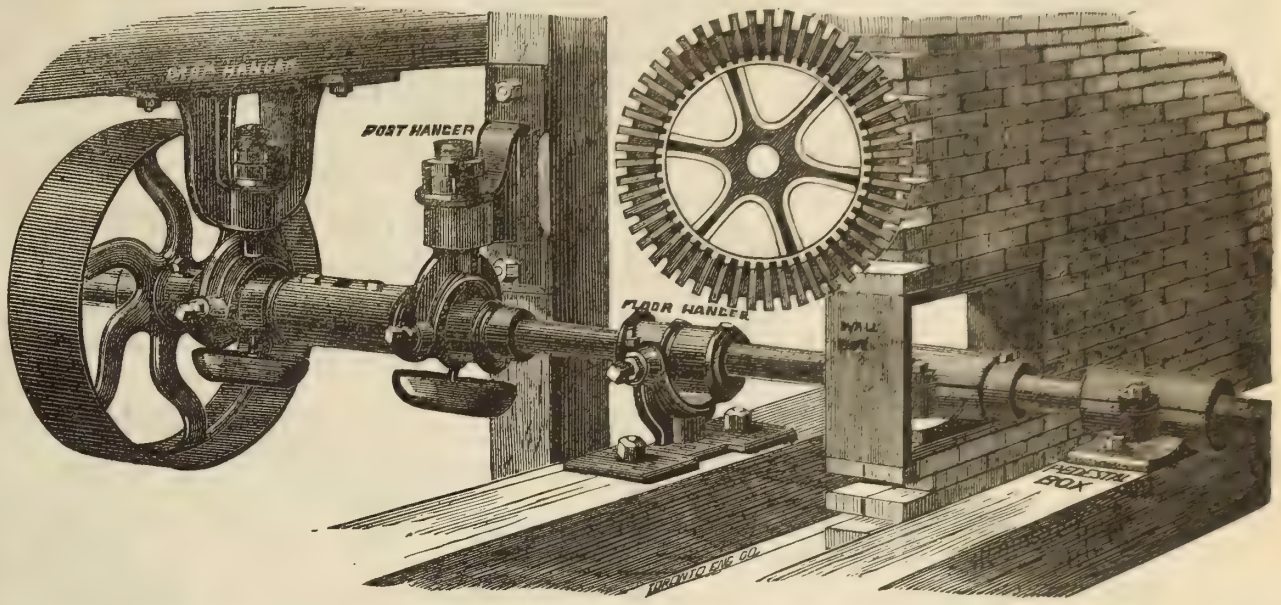

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SWORN STATEMENTS MADE BY LIFE INSURANCE COMPANIES TO THE CANADIAN GOVERNMENT.

NAMES OF COMPANIES.	TOTAL BUSINESS IN CANADA.		NEW BUSINESS OBTAINED IN '79.		POLICIES BECOME CLAIMS IN 1879.	DEPOSIT AT OTTAWA.
	Total Prem. re. in 1879.	Total Ins. in Force.	No. Pol. issu'd	Amount of Pol. Issued.		
CANADIAN.	$	$		$	$	$
Canada, Hamilton	536,293	18,945,715	1,402	2,633,100	157,821	54,000
Confederation	154,898	5,928,328	1,012	1,545,650	31,494	77,650
Sun, of Montreal	101,844	3,620,783	524	818,600	18,000	50,400
Ontario Mutual	62,537	2,151,413	427	690,000	11,500	50.541
Mutual, Hamilton	30,805	1,262,855	156	201,500	7,300	81,075
Citizens', Montreal	28,292	1,171,845	183	406,250	11,000	50,400
Toronto	4,674	163,609	19	17,606	1,000	20.160
BRITISH.*						
Standard	152,237	5,437,066	309	697,600	57,836	153,000
Lon.& Lancashire.	58,456	1,783,188	225	400,600	20, 70	110,000
Brit. & Mercantile	26,989	1,019,224	6	38,000	39,057	Fire & L.
Royal	27,725	1,012,568	20	65,575	20,554	Fire & L.
Commercial Union	22,996	674,569	16	51,373	24,516	Fire & L.
Star	17,546	681,429	38	107,067	21,982	100,343
Liv., Lon., & Globe	10,136	286,004	7	15 433	1,117	Fire & L.
Queen	16,642	394,581	14	77 750	6,000	Fire & L.
Briton Life	4,094	106,910	6	10,500	2,000	54,993
AMERICAN.*						
ÆTNA LIFE	307,847	9,289,325	935	1,386 600	131,883	**195,000**
Equitable, of N.Y.	180,327	5,266,992	475	1 285,500	38,785	105,000
Union Mutual, Me	91,691	2,732,914	167	277,850	43,704	115,000
Travellers	89,691	3,072,782	215	336,150	10.830	126,100

*In examining the table it must be borne in mind that it relates only to business done in Canada. This comprises the *whole* of the business done by the local companies, but only the Canadian business of the British and American Companies. The Ætna's total income was **$4,350,897.30** in 1879.

☞ Of the $131,883 of "Policies become claims" in the case of the ÆTNA LIFE, **$53,764** was by the maturity of Endowment Policies—*i.e.*, policies payable at death or the end of 10, 15 or 20 years if living. In the other 19 companies, all combined, only a total of $24,943 of this excellent kind of insurance was paid in 1879.

$36,000 was added by the ÆTNA LIFE, the past year, to its Government Deposit, making it the largest of any Company, and nearly 4 times that of most Canadian Companies.

☞ The superior standing of the ÆTNA LIFE is shewn by its total income being **$4,350,897.30**, and by its Canada Branch income being nearly equal to the combined premium income of the whole 9 British Companies, or that of the 3 lesser American Companies, or that of all the Canadian Companies but one. This one has been 32 years getting $536,293, while the Ætna's $307,847 has grown from less than $1000 in the past 14 years.

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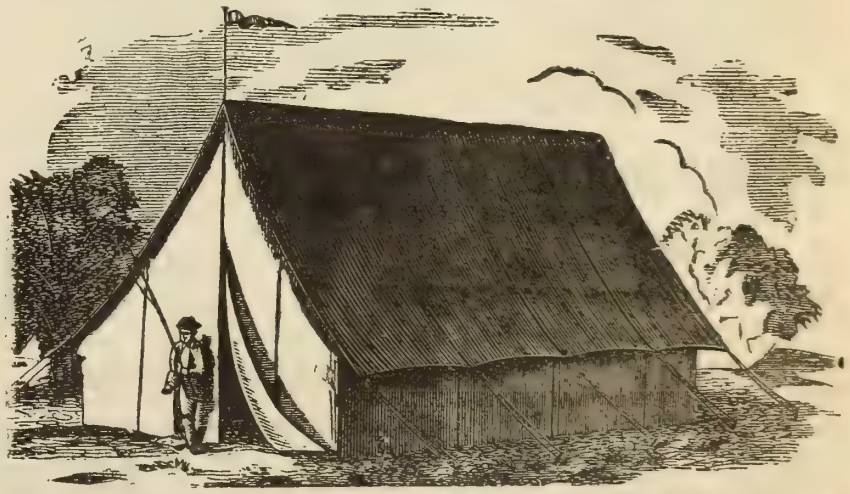

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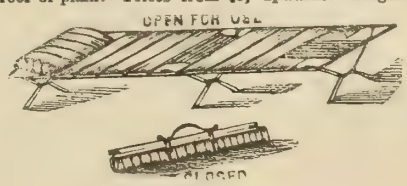

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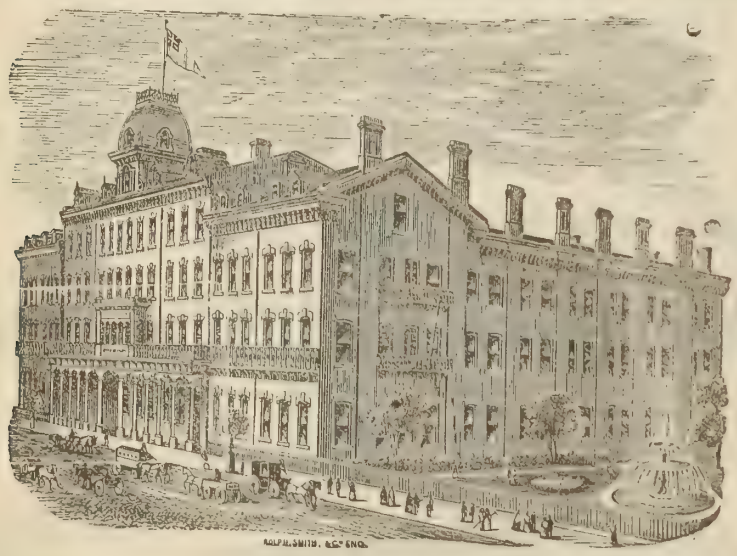

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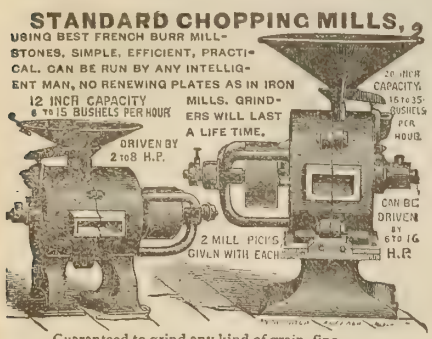

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VOL. I.—NO. 5. TORONTO, ONT., DECEMBER 15, 1880. $2 PER ANNUM.

THE KEEWATIN TERRITORY.

The following interesting particulars have been furnished by Mr. John Mather, Manager of the Keewatin Lumber Company's Mills, at Keewatin, Lake of the Woods. Mr. Mather, who was for a number of years manager of Messrs. Gilmour's mills at the Gatineau, is well qualified to form a correct opinion of the country and its resources. He arrived at Ottawa recently, where he remained on business for a short time.

ITS RAPID DEVELOPMENT.

Keewatin the site of the Keewatin Lumbering and Manufacturing Company is situate at the western outlet of the Lake of the Woods, and about three miles distant from Rat Portage. It is about 125 miles east of Winnipeg, 100 miles east of Selkirk, and 300 miles west of Thunder Bay. This new village is a rival to the older settlement of Rat Portage, which has gained its principal importance, according to Mr. Mather's statement, from having been made the district headquarters of the Pacific railroad construction staff. There is a station of the Pacific railway at Keewatin, and already it has become an important shipping point. Here, Mr. Mather says, is the greatest water-power along the whole line of the Pacific Railroad in the North-west Territories. The head of water is, on the average, twenty-one feet, and the quantity which passes is possibly slightly in excess of the volume which dashes over the Chaudiere Falls at Ottawa. There are large and important water-powers in the North-west Territories, but they are all remote from the Pacific Railroad.

WHEAT FOR THE WORLD'S MARKETS.

This is the point where a large portion of the wheat grown in the North-West will be ground before shipment to the Canadian and European markets, just as American wheat is ground at Minneapolis. Already negotiations have been opened with the Hudson Bay Company for the purchase of a site and water-power at the eastern outlet of the Lake of the Woods for the erection of a large grist mill, not to carry on a mere local trade, but to grind for the world's markets, as soon as the Thunder Bay branch is open for through traffic. Keewatin has already become the centre of lumber manufacturing, and soon will obtain a more than local celebrity. The Keewatin Lumbering Company's mills have been in operation all the summer, and the Company have cut and built five large permanent trestle bridges for the Canadian Pacific Railroad. Messrs. Brandenburg & Co., who have large lumber mills at Knife Falls, on the St. Louis River, near Duluth, on the American side of the boundary line, and have entered into partnership with Mr. W. J. Macaulay, of Winnipeg, for the purpose of erecting and operating a lumber mill on the site of the old Rat Portage. The capacity of this mill, which is now in course of erection, will be five million feet per season. The capacity of the mill at Keewatin is about twenty million feet. It is rumoured that the Pacific Railway Syndicate will establish district workshops at Keewatin for the Pacific Railroad

MANUFACTURING AND MINING.

The development of the territory around the Lake of the woods promises to be very rapid as soon as through trains are running over the Thunder Bay Branch Railroad. Already the railroad construction has given an impetus to Rat Portage, where fifteen or twenty houses are being erected at the present time; and a similar number at Keewatin village, needed for the workpeople congregating around the mills. There is no agricultural land of an extent throughout the district—it resembles very much the township of Wakefield on the Gatineau River. What land there is is fertile, but the maximum extent of each patch is two or three acres. It can never sustain an agricultural population. The future of the territory depends upon its supporting a large manufacturing and mining population.

TIMBER AND RAILROAD TIES.

A few questions relative to the rumoured want of economic timber in the territory led Mr. Mather's conversation to a subject with which he is familiar. "Whoever says that the timber in the Keewatin Territory possesses no economic value," he replied, "speaks without warrant. The supply of timber will last for a period much longer than I should like to say. The red pine is much finer than any I have ever seen on the Ottawa; the white pine is similar to that on the Coulonge and Black River tributaries of the Ottawa. There is no maple or beech in the territory, but there is a large quantity of very fine cedar and tamarac, and what is called jack pine. These last three woods are all suitable for railroad ties, which will be so much required in the North-West Territories. In fact, in a few years, this will be the only district for eight hundred miles along the Pacific Railroad where ties can be obtained. This section of the road will require two million ties at first building, and an average annual supply of four hundred thousand ties for repairs thereafter. The district producing this wood suitable for ties is all tributary to the Lake of the Woods, and the timber can easily be floated to the crossing of the railroad.

ABUNDANCE OF ECONOMICAL MINERALS.

The abundance of the economic minerals found in this district has already been made the subject of considerable observation by the *Globe's* special correspondent, who recently traversed that district, and Mr. Mather had little to add on the subject. The gold excitement still continues, and discoveries of gold in quartz rock are daily recorded. Capital at the present moment is the great desideratum for the development of this industry. It is not forthcoming so far. Besides gold, silver and copper are found in large quantities. A soap stone of considerable economic value is also abundant. Large deposits of this stone are found at a place on the Lake of the Woods called Pipe Stone Point, because the Indians from Minnesota and other Western States in the past resorted here to obtain stone for making pipes. Another stone, an excellent substitute for the oil stones used by carpenters to sharpen edge tools, is abundant, and will command ready sale. Lignite, too, has been found, but generally in boulders brought from a distance by glacial action. The indications are that the true bed of lignite will be found on the Minnesota side of the boundary or water shed of the Lake of the Woods.

CONSTRUCTION OF THE RAILROAD.

A large body of men are still at work upon the Section 15, and work is being prosecuted as fast as possible.

The approach of winter has necessitated the discontinuance of work in the gravel pits, and consequently the discharge of a large body of men. The rails on the road are laid, and trains will be able to run without any difficulty till next spring. There is already one "lift" of ballast on the road from Cross Lake to Keewatin, 36 miles. On a portion of this distance the line is entirely finished, as also it is from Selkirk to Cross Lake.

ERECTION OF STEEL BRIDGES.

The Toronto Bridge Company have their foreman, Mr. Dansizer at the Lake of the Woods waiting to superintend the erection of two steel bridges across the two outlets of the lake. It was, by some unaccountable means, delayed in Duluth for six weeks. The masonry has already been built, and is waiting for the superstructure.

SALE OF FORT FRANCES STORES.

Recently the Government stores at Fort Frances Lock were taken to Keewatin and sold by auction. The steamer Lady of the Lakes, used on the works, was also sold, and purchased by Mr. W. J. Macaulay, lumberman, for $1,500; she originally cost considerably over one hundred thousand dollars, and was purchased by the Macdonald-Cartier Govarnment to ply in connection with the Dawson route. She has, since the sale, met with an accident, but will be at work again next summer, towing logs, &c. The Keewatin Lumbering Company have also built a small steamer for similar purposes.

THE BOUNDARY DISPUTE.

Much inconvenience is caused to settlers in this district by the non settlement of the boundary question; and they are as much isolated from the exercise of their civil rights and the protection of the law as if they were residing in the heart of the "Dark" Continent. There is no Court where a man can sue or be sued, or where he can collect a debt or seek restitution for losses sustained. The only persons who obtain the benefits of the law are the whiskey smugglers, who, if captured, are introduced to the Stipendiary Magistrate appointed under the Act for the better preservation of order in the vicinity of public works. No school system can be established until this unfortunate dispute has been settled. The education of the children—and there are many in the settlement—is provided by private co-operation. The Keewatin Lumbering Company are about erecting a schoolhouse at Keewatin for the convenience of their employees' children. There is no system, and there can be none until the matter is definitely settled.

"WET GROCERIES," WHICH PAY NO DUTY.

An enterprising Yankee has cut a road through the bush from Hallock's Station on the St. Paul and Manitoba Railroad, to a point near the boundary line at the Lake of the Woods. At this place he has established a store or "whiskey shanty," where all kinds of "wet groceries" are dispensed to visitors from Rat Portage, in Canada. All kinds of goods are smuggled into Canada from this man's shanty, and a considerable loss inflicted upon the revenue of the Dominion. During the past season he is said to have carted along this road, from Hallock's to his store, over eighty-thousand dollars worth of goods. An effort should be made to stop this illicit traffic.

A WET SEASON.

In this district, as throughout the North-West Territories, the season has been an unusually wet one. The earliest settler does not remember the like.

AN UNFAVOURABLE VIEW OF MINNESOTA.

Mr. Mather, adverting to the absurd stories published of the floods in Manitoba and the swampy character of the country, characterised them as much exaggerated. "Why," he said, "about Dominion day last I had occasion to go from Winnipeg to Minneapolis. On leaving Manitoba the weather was fine, and the whole country along the railroad high and dry. The crops could be everywhere seen growing and thriving. But a considerable distance along the St. Paul and Manitoba Railroad in Minnesota I noticed that long stretches of country were covered completely over with water as if there were lakes there. The wheat was completely under water, and all farm field work suspended. This was the very territory a few months previous I had admired, because it was so dry and high."

A MESMERIC EXPERIMENT.

Thirty Christmas nights have come and gone since that one, so memorable in my life, and yet sitting here in my solitary room, a gray-haired, lonely woman, the whole scene rises as vividly before me as though it had occurred but yesterday. I can see the comfortably but plainly furnished, low-ceiled, old-fashioned room, with its dark wainscoted walls, and its dim corners, that the feeble light of a couple of composite candles could scarcely reach; I can see the half circle of faces gathered round the hearth, looking glowing and pleasant in the ruddy glare of the firelight—all except one, that of a man who sat in the corner opposite to me.

I could not keep my eyes off that face, which had for me the fascination of ugliness; as the lights and shadows made by the flickering flame touched the shock of bristly hair that half concealed the low, narrow forehead, the cavernous eyes, sunken cheeks, and huge mouth, half open with a cynical smile, that showed the tusk-like teeth, I could compare it only with a shifting series of gargoyles from some old monkish ruin.

We were all members of the company of the theatre Royal X——, and, it being a non-play night, we were assembled at the lodgings of one of our members, a lady, to do honour to her birthday. Our usual theme, the affairs of the theatre, past, present, and future, being exhausted, the conversation, I can not remember how, had turned upon mesmerism and clairvoyance, and I was stoutly declaring my utter disbelief in either, my scepticism being greatly intensified by the circumstance that Tony Arnold—the man I have just described, and who was one of the low comedians of our company—took the opposite side. There had always been an antagonism between us, and, although I had no actual cause for such a feeling, a positive dislike upon my part, which I believe was pretty strongly reciprocated upon his.

Although I was scarcely 29 at the time, I was what people would have called rather a strong minded girl, with opinions of my own that I never shrank from asserting, with an obstinacy that no argument could overcome; and on this night, excited by a spirit of defiance to my vis-a-vis, I expressed them with a bigotry and contempt that were anything but polite to those who differed with me.

"By your positiveness, Miss Gr——s," sneered Arnold, "I presume you have had a very large experience of the trickeries of mesmerists."

"Oh, indeed I have not," I replied sharply, "I was never at any exhibition of the kind in my life, and never intend to be. I should not have patience even to witness such a transparent imposture."

"Suppose," he said, and there was a gleam in his eyes which indicated rising temper, "suppose I could give you ocular demonstration that you are wrong, by placing some one in this room under mesmeric influence; I have done the thing often. If I did this before your own eyes, when you would be quite assured there could not be trick or collusion, would you believe it then?"

"I don't know that I should," I answered doggedly. "If you have such a power," I added with a contemptuous smile, why don't you try it upon me?"

Arnold was evidently taken aback. I do not think he dreamed of my taking up his challenge. He regarded me some seconds with a doubtful, wavering glance, which I met defiantly and mockingly.

"I would prefer any one else in the room, he answered hesitatingly.

"Of course you would," I replied with a malicious laugh. "I am not a good subject; the mystic influence is powerless over disbelievers. Oh, I know all the jargon!"

And I cast a triumphant glance round the company, who were exceedingly amused at our discussion.

Arnold turned alternately white and red with rage and mortification.

"It is not that," he answered quickly, then paused, but, evidently stung by my contemptuous laugh, he added instantly:—"Very well, be it so, since you desire it."

The prospect of having the discussion so summarily tested and adjudged created an intense excitement, and I could feel my own cheeks burning and my pulse galloping at fever heat as Arnold proceeded to make preparations for the experiment.

I anticipated the usual passes and hand wavings of which I had read, but I soon perceived that his method was going to be entirely different. He began by placing two chairs exactly opposite to one another, in one of which he requested me to be seated; then he draped a large black cloak around me, so that only my face rose above it; then a lamp, borrowed from the landlady of the house, was set in such a position that the light should focus upon my face, after which he took the chair opposite to mine and desired me to fix my eyes firmly upon his, and not remove them for a second.

I followed his instructions, and the next moment I was staring intently into a pair of greenish-brown orbs that I could feel did not meet mine with equal steadiness. There was profound silence, broken only by a little suppressed giggle from the females, and an occasional low whisper from the men.

We had been thus only a few seconds when Arnold sprang up, exclaiming: "Its no use, I can not do it."

A shout of laughter hailed this confession of defeat, and, throwing off my drapery, I jumped up and joined heartily in the chorus.

Arnold was white as death, and extremely agitated. He made no reply to the volley of "chaff" that assailed him on all sides, but again turning to me, said in a tone of intense earnestness: "I can not mesmerize you, but you can me; those strong, steel gray eyes of yours, with their metallic lustre, are far more potent than mine. Come, will you try?"

I did not need the incitement of hand-clapping and the chorus of 'Oh, do!' that greeted the proposition, to promptly consent. I began to be deeply interested in the experiment, and now that I was myself accredited with possessing this occult power, my scepticism began to waver.

"But before we go any further," he said, "I must make one condition—and that is, that should I fall into a comatose state, you will not put to me any question of a private nature—as I shall be compelled to answer truthfully, literally, whatever it may be."

I promised faithfully not to do so,

The previous disposition was now reversed, the lamp was set so that the light should shine upon my face, and Arnold was enveloped in a cloak, as I had been.

And now, with all the nerve power I possessed, I fastened my eyes upon Arnold's. White and ghastly looked his face rising out of the blackness of the drapery, which gave it almost the appearance of being divided from the body and suspended in space. The lips were wide apart, and the greenish eyes were dilated to their utmost extent, with a strained fascinated look, such as they might have worn under the influence of a rattle-snake. I could scarcely suppress a shiver at this uncanny-looking picture; but a wild spirit took possession of me that night which soon swept away all such "compunctious visitings of nature." Everybody seemed to be thoroughly impressed by the weirdness of the situation; there was no giggling, no whispering, all was silent as death. After about a minute my eyes grew rigid in their intense stare, until it seemed to me that I no longer had the power to move or close them, or even wink a lid; gradually I could feel the pupils dilate, until they seemed to become two huge discs glowing with a lambent and metallic fire. I could see that every nerve of the white face was quivering, the breathing was short and labored, and a dull, stony glare came into the starting eyeballs, a far-away, trance-like look, that told me consciousness was gone, and that the very soul of the man had passed over to my keeping. And I felt a cold, cruel, hard triumph in this, a desire to strain mastery to the utmost. I rose from my seat, slowly moved backward, and imperiously beckoned him, never relaxing my fixed stare, which seemed to scintilate and flash. As I rose, he rose, clutching the edge of the table to guide his trembling steps. Slowly I moved, he following, seemingly impelled by an involuntary but resistless impulse. I stopped suddenly; he stopped.

"What is your name?" I asked imperatively.

In a forced, hollow voice he gave one that I afterward discovered was his family name, Arnold being only a theatrical sobriquet.

At this one of the gentlemen broke in, protesting:

'No, no; that is againgt the bargain—no questions."

"It is time to put an end to it; I don't like it," said another.

"Oh! yes," added a lady, 'too horrible."

The interruption seemed to exercise the fiend that possessed me, and call me back to myself; with an effort I wrenched my gaze from that ghastly face. As I did so, Arnold, as though he had been only upheld by my eyes, fell upon the floor in strong convulsions.

Our experiment in mesmerism spoiled the rest of the evening; for although after a copious outward application of cold water, and a judicious inward one of neat brandy he soon recovered and tried to laugh off his illness, it left a creepy, disagreeable depression upon all, which no amount of hot spirits and water and forced jollity could succeed in dispelling.

As it may be supposed, the effect was strongest upon me, and it chiefly took the form of intense annoyance at the part I had played; I would have given anything to have realized the past few minutes. After Arnold's recovery, by a tacit understanding, no one made any reference to his strange illness, indeed all seemed desirous for a time of putting it out of their thoughts—and none so much as the principal actor in it, who laughed and jested in a feverish manner and never allowed the conversation to flag for a single moment, as though he feared the subject might crop out again.

Everybody, however, was eagerly discussing the singular event the next morning at rehearsal. I avoided the gossiping groups, for the remembrance of the scene was a horror to me; so did Arnold, whom I studiously attempted to avoid, but he took an exact opposite course, followed me wherever I went, trying to engage me in conversation and to catch my eye, as though some of the fascination of the previous night still surrounded me.

After a rather late dinner, for the rehearsal was very long, I was dozing in my chair when there came a soft tap at the door, and to my sleepy 'come in' there appeared upon the threshold the tall, gaunt figure of the man whom of all others I last desired to see. It gave me quite a shock. It was the first time he had ever called at my lodgings.

In common courtesy I was obliged to ask him to take a seat and draw near the fire, as the weather was cold. In a vague, listless manner he placed a chair in such a position that it exactly faced mine, dropped into it without a word, and tried to fix my eyes. I immediately shifted them and gazed into the fire.

He made no attempt to account for this visit; he talked very little, and in an absent manner—that betrayed that his thoughts were not on his tongue—about the business of the theatre. I felt very embarrassed by his presence, and presently rose and rang for tea. What could I do but ask him to remain and take it with me? He said 'thank you,' and kept his seat. I felt quite terrified by the change that had come over him—from a noisy, jesting, rollicking kind of fellow, who had always a jibe for me, to this silent, subdued man, with those dreadful eyes ever yearningly seeking mine.

At length he went away, and never in my life did I feel so thankful for anybody's departure.

But he came the next day about the same time, and acted in just the same manner, until the lights were brought in; then all at once he rose from his chair, crossed over to where I was sitting, and, laying his hand upon my arm, said, in a hoarse whisper: 'Mesmerize me!'

I started back and answered, shudderingly: "Not for worlds!"

"You must," he answered passionately.

And somehow or other, I cannot tell how, a few minutes afterward we were sitting *vis-a-vis* staring into each other's eyes. In less than a minute there was in his face the dull stony vagueness of insensibility.

I covered my face with my hands, but withdrew them, as I heard something fall heavily upon the floor, to see him huddled at my feet in convulsions, and froth bubbling upon his lips.

When he recovered I nearly fainted myself; but rallying by an effort, I told him very positively that he must not come any more.

"I cannot stay away; I must come," was his answer. And again the dilated eyes began to wander cravingly in search of mine.

I cannot describe the horror I felt at these visits, and at length I begged a lady friend I had in the theatre to come and stay with me. The following afternoon he strolled in as usual, but finding I had a companion he looked very annoyed, and remained only a few minutes.

Several days passed, and I met him only in business. His manner was sullen, almost rude to me, at which I was much relieved, for I now began to entertain hopes that he would persecute me no more. The change that had come over him was a constant subject of green-room comment; he had always been extremely thin, now he seemed to waste day by day, like a man consumed by an inward fire; his cheeks were sunk in deeper hollows, and there were black rings around his eyes.

After a few days my friend returned to her own lodgings. The next afternoon, at the usual hour, Arnold came as before.

As soon as the lights were brought in he again besought me to mesmerize him. I firmly refused; but I could not rest my eyes upon him for a moment without his face beginning to quiver and his pupils to dilate, and the very feeling that I must now look at him made the desire almost unconquerable. Matters went on thus for upward of a week.

But surely, it will be said, you could have devised some means of keeping him away; you might have requested your landlady to refuse him admittance. Truly, I could have done so, but—well, I must confess it even in my own defense—Arnold had begun to throw a strange glamour over me. I dreaded his coming, yet I experienced a vague yearning when he was absent. I had fallen myself within the meshes of the spell I had unconsciously cast upon him.

One afternoon he arrived rather earlier than usual; there was certainly some occult sympathy between us, for the moment he entered the room I felt that a crisis was come.

He was in very weak health, and he sank down in a chair looking pale and exhausted, and wiped the damps from his forehead, while his breathing was very labored; and there was a feverish glitter in the restless eyes and a red spot in each hollow cheek.

"How very ill you look," I said pityingly; "let me give you a glass of wine."

"No, I want nothing," he said in a gasping tone, "there's quite a fire burning within me now; I am being slowly burned up."

"Have you seen a doctor?" I asked, growing very nervous.

"A doctor," he echoed with a mocking laugh. "Oh, yes, I have seen a doctor, but he can do me no good. It is you who are killing me."

"I!" I answered faintly.

"Yes," he answered; "since the night you tore the heart and soul out of my body I cannot live without you, and I won't."

I was very much terrified by his wild, excited looks, but replied with a great show of firmness: "You talk nonsense, Arnold; why, you are married already."

I did not know at the moment whether it was really so, but there was a vague impression among the company that such was the case, and it was upon that authority only that I spoke.

"How did you know that—you questioned me when I was under your influence?" he retorted sharply.

"I did not, but I find it is true. And under such circumstances, how dare you address me in such terms?" I exclaimed, growing very indignant, perhaps more in seeming than in reality.

"Yes," he replied, dejectedly, "I am married to a woman I hate; to a woman I left at the church door. I was forced into it by my friends—never mind why; that would not interest you."

He paused for a moment, then laying his trembling fingers upon my arm, he added: "Alice," he had come to call me by my Christian name, "if anything were to happen to he.—if she were to die—would you be my wife?"

I started away from him, exclaiming: "Don't talk like that, it is too horrible!"

But he followed, and again grasped my arm, and said: "Alice, I told you just now that I cannot live without you, and that I will not, and I swear before God that if you do not give me this promise, when I leave this house I will throw myself over the bridge, into the river—I swear it!"

Men—and women, too,—say these things in moments of strong passion without keeping their words; but I knew that he would keep his, the mysterious sympathy that had been created between us told me so, told me that if he left me with that thought in his heart, he would not be a living man within the next hour.

It was nearly dark, just between the lights, and his face gleamed out of the shadows white and terrible, and then I thought how it would look when it was drawn out of the water with the long dark hair clinging about it.

"It is not too much to ask of you," he went on, pleadingly. "Why, she may outlive us both; more than likely; there is nothing shocking in it—she is nothing to me, never has been, only the mockery of a ceremony links us."

"But what is the use of a pledge, what

satisfaction can it be to you?" I said, still with my face covered, for I dreaded to meet his eyes.

"I don't know," he answered; "It would give a sort of hope that I can't live without, that I won't live without."

"Well, I gave him the promise. I dare say you will consider it was very wicked of me to do so. I think so myself. But I thought it was almost impossible that I should be ever called upon to fulfil it, and how could I hesitate when a man's life seemed at stake?

The following morning, as I was seated at breakfast, I caught sight of Arnold's dark figure passing my parlor window, and the next moment I heard his now well-known knock at the street door. I put down the cup of coffee that I had raised half way to my lips, while an unaccountable dread stole over me.

One glance at his countenance as he entered the room told me that something had happened. He did not look at me, not even exchange a greeting, as he laid down his hat and took a chair.

"I have strange news to tell you, Alice," he said in a voice thick and indistinct with agitation.

"For God's sake don't tell me that—"

I could not complete the utterance of my fears, my voice died away in my throat, and with parted lips and rigid eyes I could only await the explanation.

Meantime he had taken from his breast-pocket a letter, which he rose and offered me. It had a deep black border.

I shrank back; I would not touch it; I knew its contents.

"You knew what was going to happen—you have cruelly entrapped me," I exclaimed bitterly.

He threw himself upon his knees at my feet. "I did not. It was very sudden, the letter will tell you so; heart disease—her friends had scarcely a moment's warning."

There was that in his tone I could not disbelieve, and when, after a while, I brought myself to read the fatal letter, I found his assertions were there fully confirmed.

"This makes it all the more horrible," I cried, "for I now feel as though I were in some way the cause of her death."

"I implored him to release me from my promise, as nothing could come of a marriage contracted under such auspices. But he only repeated the old words: I cannot live without you, and I won't!"

"My friend who could perceive how ill-assorted were, did all in her power to persuade me to break with him. 'Leave the company,' she said, 'give no notice of your intention, and go home, or take another engagement under another name.'

"But I felt that I could not break a vow so solemnly made, and which fate, whether for good or evil, had so suddenly called upon me to fulfil.

"No, I am wrong; I did not love him, it was only a glamor—whether the result of supernatural influence or mere superstition I cannot pretend to say—it was a mixture of dread, repulsion, and fascination.

"That day two months was our wedding-day. I had strive hard to postpone it to a much later date, but he would not give me a moment's peace until I consented. 'She was only my wife in name,' he kept urging, 'so what need is there of delay?'

"Although the strange manner of our wooing was unknown to everybody save the friend I have before mentioned, it was impossible for the company not to see how matters stood between us. But somehow we had drifted away from the rest, and now kept aloof from them, and only an occasional hint, or innuendo, or sly look told us of their observation. I know we were the constant theme of conversation and wonderment, but I do not think any one ever dreamed it would be a match.

"And we were both equally desirous of keeping our approaching marriage a profound secret. My friend, and one of the actors whom Arnold had a most sworn to secrecy, were to be the only witnesses, so that when on that bright March morning we entered the quiet suburban church, only a few strange loiterers were there. We were dressed in our ordinary costume, and no one who had met us would have suspected our purpose.

"When he passed the ring over my finger his hand was like ice, so were his lips that just touched mine at the end of the ceremony, and I saw no joy in the livid face, that was expressionless as though carved in stone.

"We walked back from the church to my lodgings, where we were to be domiciled for the present. He scarcely spoke the whole way. He left me at the door, saying that he was obliged to go somewhere, but that he would return in time for dinner, which was arranged for three o'clock.

"I ran upstairs to my bedroom, my heart ready to burst with mortification, and had a good cry. My friend did all she could to console me and to put a cheerful face upon matters, and after a while I rallied a little, and went downstairs and sat down to the piano, and played and sang to pass away the time.

"Three o'clock came and passed, and still he did not return. Then his friend, who had remained with us, said he would go in search of him.

"In about half an hour he came back, bringing Arnold with him. He afterward told me that he had found him playing cards, and recklessly treating everybody who entered the room at a tavern used by the actors. I always possessed a great deal of self-control, and I kept myself quite tranquil.

"It had been arranged that we should sup at my friend's lodgings, and thither, after the performance, for we played that night, we went. There were only four us—the four present at the ceremony. Arnold was dull and sullen, and at times seemed scarcely conscious of where he was, for, when addressed, he would start and look vacantly about him, like one suddenly aroused from a doze.

"It was two o'clock in the morning before we turned our faces homeward. Silently he pursued his way; and I was too proud to speak. But, oh, the agony, the shame, the humiliation I endured that night! When we arrived at our lodgings the fire was out. It was a very chilly night, and he complained of being cold, and said he should rekindle it. While he went away seeking some wood in the kitchen I ran away up stairs to my room and went to bed.

"At last my aching, swollen eyes closed, and I fell asleep.

"When I awoke the cold gray dawn of the spring morning was just stealing across the darkness of my room. I awoke with a start, and sat bolt upright, with a sense of ineffable horror. Had I been dreaming? I could not remember. Yet there was upon me all the terror which is left by some ghastly nightmare.

"I leaped out of bed, huddled on a dressing-gown, and with bare feet hurried down the stairs. It was impulse, nothing more, for I had no thought in what I was doing. I opened the parlor door and looked in. All was dark and silent.

"'He has gone to sleep upon the sofa,' was my reflection. My woman's pride prompted me to return to my chamber, but some other feeling held me rooted to the spot. The chinks of the shutters were pencilled with faint lines of light. I crossed the room, unbarred and threw them open, and looked up at the sky. The waning moon was high in the heavens, over which a faint roseate flush was just stealing, and a wild chorus of birds in the trees close by alone broke the deep stillness of the early morning.

"I stood gazing upon the picture for some seconds not because I felt its beauty, but because I dared not, turn my head.

"When, after a time, I summoned up resolution to do so, it was slowly and by degrees. First my fell upon the sofa; that was empty; then they traveled toward the hearth. The fire had burned into a great hollow, gray and brown within, black above. I could see only a portion of the grate, as an easy-chair was drawn in front of it. There was something in the chair, something lolling sideways; and there was a coat-sleeve with a hand dangling across one arm. I could feel my hair bristle and my heart stand still as I crept up to it, and saw a huddled heap of clothing, in which was half buried a livid, hair-strewn face.

"It was my husband—dead."

NOTE.—This story is not only founded upon facts, but the events happened almost exactly as they are related here.—*Temple Bar.*

As John Miller, toll gate keeper in Adams county, Pa., went out to collect toll of an old man who was passing through the gate, a bystander remarked that the two men looked enough alike to be twins. Investigation proved that they were twin brothers born in 1816 who had not seen each other for sixty years. When they were four years of age their mother, a poor woman, sent them into separate counties to live among friends. This was the last they saw of each other until this adventure. Daniel Miller had lived within twenty miles of his brother, but had no knowledge of the latters' existence.

How Long will the Sun Last?

PROFESSOR C. A. YOUNG GIVES HIS VIEWS ON THE FUTURE OF THE UNIVERSE.

(From the Popular Science Monthly).

How is the heat of the sun maintained? How long as it lasted already? How long will it continue? After affirming that, in the present state of science, only somewhat vague and unsatisfactory replies are possible, Prof. Young holds that, so far as observation goes, we can only say that the outpouring of the solar heat, amazing as it is, appears to have gone on unchanged through all the centuries of human history. The author thinks that there is some truth in each of the two theories which have been proposed to account for the sun's fire.

As to the first, the impact of meteoric matter, it is quite certain that solar heat is thus produced; but the question is whether the supply of meteoric matter is sufficient to account for any great proportion of the whole. After giving Sir William Thompson's calculation of the amount of heat which would be produced by each of the planets falling into the sun from its present orbit, by which it appears that Jupiter would maintain the sun's present expenditure of energy for 32 - 254 years, and Mercury for six years and 219 days, and that the collapse of all the planets upon the sun would generate sufficient heat to maintain its supply for nearly 46,000 years; and after estimating that matter equal to only about one-hundreth part of the mass of the earth, falling annually upon the solar surface, would maintain its radiation indefinitely, Prof. Young thinks it improbable, from astronomical reasons, that any such quantity of matter can be supposed to reach the sun. So large a quantity of matter would necessitate a vastly greater quantity circulating around the sun, between it and the planet Mercury. But if there were near the sun meteoric matter equalling, for example, the mass of the earth, it ought to produce an observable effect on the motions of Mercury, and no such effect has yet been detected.

Astronomers, therefore, failing to find a full explanation of the cause of solar energy in this hypothesis, have adopted a second one, which is, that the sun's diameter is slowly contracting, and that the gaseous mass is gradually condensing and becoming solid. The conclusion is drawn that, if this theory be correct, there must come a time when there will be no solar heat, as there has also been a time when it began. How far forward is the end, how far backward the beginning? Newcomb is authority for the statement that, with its present radiation, the sun will shrink to half its present diameter in about five million years. Reduced to this size, and eight times as dense as now, it would cease to be mainly gaseous, and its temperature would begin to fall. Hence Newcomb assigns as the term during which the sun can supply heat enough to support life on the earth, as we know life, a period of ten million years.

The writer somewhat more confidently casts his eye backward, and concludes that the sun cannot have been emitting heat at the present rate for more than eighteen million years if its heat has been generated in the manner described. If the sun has contracted from a diameter even many times larger that that of Neptune's orbit, to its present dimensions, as if probably true in the main, "we are inexorably shut up to the conclusion that the total life of the solar system, from its birth to its death, is included in some such space of time as thirty millions of years; no reasonable allowance for the fall of meteoric matter," &c., "could raise it to sixty millions." The possibility of collision with wandering stars, and the suggestion of ways as yet unconceived of for restoring wasted energy, are followed by the statement that "the present order of things appears to be limited in either direction by terminal catastrophes which are veiled in clouds as yet impenetrable."

A STRANGE kitten was given a home, on the steamship Illinois, which was then in her dock in Philadelphia. When the steamer left Liverpool recently for home, it was found that the kitten had been left behind. The captain and sailors were much grieved, because they never expected to see her again. When the British Crown, the next steamer of the American line to sail from Liverpool, arrived in Philadelphia, the first passenger to creep ashore was pussy. With tail and mane erected she flew on board the Illinois, and began to race about the decks, showing in every way her dumb nature would allow the joy that was in her heart at getting back to her old home.

PERSONAL.

MR. HUGHES says that Dean Stanley was the original of Tom Brown.

SIR EDWARD THORNTON and his family return to Washington this month.

MR. MILLAIS returns his income to the Commissioner at seven thousand pounds.

THE Dean of Windsor is the confidential adviser of the Queen in all matters belonging to Church patronage.

GEROME, the artist, is now not far from sixty years old, and is said to be one of the handsomest men in France.

LORD HOUGHTON'S tenants lately presented to his new daughter-in-law, Mrs. Milnes, a fine bracelet of pearls, diamonds, and rubies as a wedding gift.

THE Empress Eugenie telegraphed to a gentleman on the staff of *Figaro* who recently lost his daughter, a message begging leave to associate herself with his grief.

JOHN BRIGHT, despite all of his Quaker antecedents, was beheld a fortnight ago moved to tears by Modjeska's impersonation of Mary Stuart at the Court theatre, London.

THE marriage of Prince William of Prussia will take place in Berlin on the 26th of February. The prince and princess of Wales will represent Queen Victoria on the occasion.

MRS. CHARLES CROCKETT, the wife of the president of the Southern Pacific Railway, has expended three thousand dollars in bringing the young actress Miss Calhoun before the public.

MR. TENNYSON has spent the autumn at his place on the Hampshire Downs, but he passes the coming winter in London, and does not leave for the Isle of Wight until summer.

BISHOP COLENSO is a man nearly seven feet tall, and of a massive frame. He is sixty-six years old, and is regarded by the natives with awe and reverence, and they salute him as a great chief.

MR. GLADSTONE having been asked, some little time ago, if he did not consider Tennyson the greatest genius of the age, replied in the negative, and added that without a doubt Disraeli merited that title.

IN spite of the fact that Prince Edward of Saxe Weimar is a German, and so not properly in command at all in the British army, he is idolized throughout his military district, and the object of universal respect in the army.

THE widower of the Princess Alice, the Grand Duke of Hesse-Darmstadt, is described as looking every inch a prince; he is tall and ruddy, has a pleasant and intelligent expression, with keen eyes, and a frank and courtly manner.

PRINCE JEROME BONAPARTE is a remarkably fine talker, but when he wearies of his interlocutor he stands erect directly before him, and yawns in the middle of one of his sentences—which answers for Bonapartes, if not for princes.

WHEN the Crown Prince visited Nuremberg, the burghers presented him with a costly album, and at the same time declared their loyalty to be as firm as the walls of their city—the walls, however, are presently to be entirely demolished.

THE Sultan seems to have more diamonds than ducats. A cigarette that he offered some one at a supper which he gave being declined, he produced a snuff box set with superb brilliants, and bade the person use that instead, and keep it.

CARVED on an old stone in a little Maryland grave-yard, after the name of the dead and the customary formula, may be read the words, "He held the pall at the funeral of Shakspeare." The late Fred Loring wrote some fine verses on the discovery.

OLIVE LOGAN has a friend who lived in Cuba, and used to observe some grand ladies driving out every afternoon with flowers in their hair, diamonds on their necks, and the volante full of the flounces of their gay silks. One day the carriage upset and spilled out the high-mightinesses, and it was seen that they had on neither shoes nor stockings.

ONE of the London papers recently remarked that Lord Dufferin's life at St. Petersburg was made insupportable by his ignorance of French. The fact is, however, that Lord Dufferin is one of the most accomplished French linguists living, and presiding once at a banquet to the Comedie Francaise, was eulogized by M. Got on the fluency and felicity of his French.

Chaudiere Mills.

Those establishments are chiefly engaged in the export trade. They are in full work usually about six months of the year, viz: from the 15th of May to the 15th of November. In this number of the LUMBERMAN we have only room to give a short description of the following :—

PERLEY AND PATTEE'S MILLS.

The firm of Perley and Pattee was established in the year 1857, and has very extensive mills at the head of the Chaudiere Falls, with large piling grounds, through a portion of which are laid lines of rails for distributing the piling and shipping the timber.

They get out annually, from 150,000 to 250,000 Standards logs, producing from 30 to 50 million feet of pine lumber, of which a considerable amount is kept always on hand. They employ a large number of men through the year; on an average about 1000, and 250 teams of horses.

Their mills are furnished with two slabbing gangs of twenty saws each; two stock gangs of forty saws each; two Yankee gates of thirty-two saws each; one single gate and one re-sawing gang, with the usual compliment of circular saws for butting and edging. The wheels employed, are Rose's improved, and the Lamb wheel; one pair to each gate.

J. R. BOOTH.

This gentleman first established business at the Chaudiere in the year 1858, by the manufacture of laths, and now carries on extensive operations in sawing pine lumber. His mills are situated on the south shore of the Ottawa, just below the falls, and manufacture annually from 26 to 30 million feet of pine lumber, of which 12 to 15 million feet are always on hand on his piling grounds, which cover a space of about 10 acres of land.

These mills are fitted with gang and circular saws as follows ;—

Three gangs containing 40 saws; 3 slabber gangs, containing from 18 to 20 saws; 1 Yankee gate containing 36 saws; 1 large circular saw for dimension timber; and a large number of circular saws for butting and edging.

The power employed is derived from the waters of the Chaudiere, assisted by 14 Rose's improved waterwheels, 2 for each gate, and upright and central discharge wheels.

This establishment gives employment, in the winter time, in the woods, to about 850 men and 300 teams, and in the summer time, at the mills, to 400 men, and 40 teams.

Mr. Booth gets out 3 or 4 rafts of square timber in the season.

LEVI YOUNG.

First established his business at the Chaudiere in 1854, and owns one saw mill, getting out and sawing about 100 000 in the year, producing about 20,000,000 feet of pine timber. He employs one slabbing gate of 40 saws; one stock gate of 40 saws; one Yankee gate of 32 saws, and the necessary edging and butting saws. The wheels employed are Rose's improved, 1 pair to each gate. In addition to this, Captain Young gets out annually about 3 rafts of square timber, employing through the year from four to five hundred men.

BRONSONS & WESTON.

This firm was established in 1853, and was the first to take up land at the Chaudiere for the purpose of establishing a saw-mill on a large scale.

They are now proprietors of two large saw-mills, and a grist-mill, lath and splitting mills, and own a large tract of land used as a piling ground—the whole premises extending from near the wooden bridge to the point of the island. They get out annually about 100,000 logs, producing between 30 and 40 feet of lumber, of which from 5 to 10 million feet are always kept on hand,

The large mill contains 2 stock gangs, of 30 to 40 saws; 2 slabber gangs, 14 to 16 saws; 2 Yankee gates, 32 saws; 1 single saw; with the necessary butting and edging saws, The smaller mill contains 1 slabber eght, 1 stock gate, and butting and edging saws.

The wheels employed are Rose's improved and the Lamb wheel.

The lath mill contains two gangs for sawing laths, 5 or 6 saws each; a butting apparatus and picket saw; and a splitting mill for slabs; and produces 10 millions of laths.

They employ for six months of the year, in shipping the productions of these mills, 26 barges with 5 men each, 4 steamboats, 9 men each, in all 222 men.

It requires $3,000 to pay the weekly wages of the employees of this establishment.

THE BUCKINGHAM MILLS.

These mills are situated on the River Du Lievre, about four miles back from the Ottawa, and in conjunction with the mills belonging to Messrs. Jas Maclaren & Co., on the opposite side of the river, have control of one of the finest water powers in Canada; the falls are 70 feet in height, and the river Lievre being very deep and supplied by many large lakes in the north, there never is any scarcity of water, even in the driest summers.

The mills having recently been rebuilt, are of large size, and fitted with every modern improvement, to save labour and to do good sawing. The business done is about 800,000 logs a year, which are sawn almost entirely into 3-inch deals for the Quebec market. A slide over two miles in length conveys the timber from the mills to the Basin, where the thin lumber is taken out and piled, and the deals are run into the water and rafted up into cribs.

All the logs sawed at these mills are made on the tributaries of the River du Lievre which drains an immense extent of country. The two firms that work on this river have, at their own expense, built very extensive slides to pass their logs over different falls, and also constructed many booms, piers, &c., at different points, the Government never having expended anything on the River du Lievre for improvements of any kind, though the public have for very many years derived a large revenue from it.

New Brunswick.

NEW SAW-MILL.

Our Chatham (N. B.) correspondent writes :—The Hon. Mr. Muirhead has commenced to build a two gang mill, on the site of the three gang one burned last spring The new mill, it is said, if not superior, will be equal to the best in the Province. The people generally hail with delight this enterprise of the Senator, and hope it will prove a financial success to him, and trust that it will be equally as beneficial to Chatham as the burned one was under his management and that of his predecessors.

ST. JOHN LUMBER EXPORTS.

The lumber exports across the Atlantic from St. John, N. B., from January 1st to October 31st are shown by the following table, with the names of shippers, and the amount shipped by each :

	Deals and ends Feet.	Timber. Pine. Tons.	Birch. Tons.
Alex. Gibson	70 433,000	20	5,252
R A & J Stewart	39 351 000	855	2,060
Guy, Bevan & Co	29 198,000	....	.....
Carville, McK. & Co.	29,990,000	291	893
W M McKay	12,322,000	1,174	3 831
S Schofield	6 191,000	31	242
McLachlan & Wilson	547,000	3	2 899
Total	186 032,000	2,374	15,177

MIRAMICHI LUMBER SHIPMENTS.

The Miramichi *Advance* publishes a table which shows the quantity of lumber shipped from Miramichi during the season just closed, by each of the shippers. The number and tonnage of the ships are as follows :

SHIPPERS.	VESSELS.	TONS.
R. A. & J. Stewart	74	38 884
J. B. Snowball	74	38 104
Guy Bevan & Co	66	33 747
W. Muirhead	32	16 816
D. & J. Ritchie & Co	32	14 527
A. Morrison	27	12 619
Geo. McLeod	21	10 635
Gilmour, Rankin & Co	11	7 298
Geo. Burchill	12	6 522
C. F. Todd	1	617
	350	179 799

The total shipment of deals is 154,694,312 superficial feet for the season, and it exceeds the shipment of 1877—the big lumber year on the Miramichi. The figures for that year were 149 938.593 s. f. deals; 5,409 166 pieces paling, and 1827 tons timber. The quantities shipped each year since 1877 stand as follows :

	S F DEALS.	PS PAL.	TONS TIM.
1877	149 338 563	5 409 166	1827
1878	104 729 702	3 055 071	66
1879	114 618 000	2 784 500	500
1880	154 694 312	4 651 703	3225

Mr. Snowball shipped ten tons juniper this year in addition to the woods stated above.

The quantity of logs and deals left on the Miramichi this season is much smaller than for many years. But for the fact that the 30,000,000 drive of logs which has hung up so long, has nearly all reached the boom, the manufactured stock left over this season would have only been a few thousands. Seven mills were sawing yesterday but they will have to cease in a day or two. Late as the delayed logs were in coming down, several millions of feet have been converted into deals from them and shipped, and the present sawing will enable some of our shippers to have a few cargoes on hand for early delivery. The trade here appears to think that the market in Great Britain is not in the most promising condition, and operations for the next year's business, therefore, should be cautiously undertaken

APPROXIMATE ESTIMATES FOR 1880 81.

A correspondent of the *Monetary Times* writing from St. John, N. B., says :—The estimate made here by some well-informed persons is that probably 400,000 000 superficial feet may be got out in New Brunswick this season. This is only an approximation; but as the exports of this province for the this season now closed say 387,000 000 lineal feet, it is not likely to be far astray. These 400,000 feet will likely be apportioned somewhat as follows ;—

The Miramichi	120,000 000	feet.
Other North Shore ports	15 000,000	"
The St. John	220,000 000	"
Other places	45,000 000	"
Total	400,000,000	feet.

To these "guesses" I may add some facts, viz: that the shipments this year from Newcastle, made in 129 vessels of 68,626 tons, were 54,808 000 feet of deals and ends as against only 15,809 000 last year. The shipments of scantlings, battens, boards and palings, were more than doubled. Of square timber, 616 tons birch and 143 tons pine were shipped, as compared with 158 tons birch and 31 tons pine in 1879, made in 36 ships of 19,406 tons.

The Result in Bayham.

In days gone by the township of Bayham was known as "saw-log Bayham," for the reason that from 1840 to 1855 lumbering was the industry of the municipality. During the early part of that period oak trees were put under contribution and the business was staving. The shipments to the Quebec market were about 100,000 pipe and 400,000 to 600,000 West India staves per year; the exact number in 1845 was 109 658 pipe and 624,707 West India. The pine, however, greatly outnumbered the oak, and although an extensive raid was organized against them they furnished much employment until about the year 1872. In 1849 there were twenty-nine saw mills in the township, and in 1851 the first steam whistle sounded in Port Burwell. Many of the mills would cut 40.000 feet per day. There is not now a single saw mill at the Port, nor six in the township doing any considerable business, but their teeth of steel did in their time cut untold millions of feet of excellent lumber, that found its way over the waters of Lake Erie to the busy marts of the world. From two to four hundred vessel loads were sent per year. Much also was sent uncut in rafts sometimes two miles long.

Trenton.

Messrs. Gilmour & Co's cut of lumber here is 32,000,000 ft., for this season. The firm are employing a number of men enlarging both mills and intend putting in more machinery to make the capacity 45,000,000 ft., for next season, which will give employment to 400 men, making this one of the largest mills in Ontario.

St. John River.

A late New Brunswick paper says :—During the past two months a large number of men and teams have gone to lumber at Burnt Hill, Clear Water and other tributaries of the Southwest Miramichi, on the lands owned by the New Brunswick Railway Company. The operations will be continued until the 15th of April next—this being the specified time when the rafting of the logs will be commenced. It is expected that about 10,000,000 feet will be got out during the winter and then rafted and despatched to Indiantown during the summer by the towboats. The lumber it is said is being cut to the order of Guy, Bevan & Co. Mr. G. Tapley and one of his brothers are to proceed to Burnt Hill, when they are to commence scaling what has been chopped. Messrs. Isaac Stevens and Guy Keswick are to accompany the Messrs. Tapley on the journey. The latter have secured a similar job on the Clear Water district.

At Madawaska the axe of the lumberman will resound through the forests more vigorously than it did for many seasons previous. It is estimated that between 8,000,000 and 9 000 000 feet will be cut during the season's operations. The lumber is intended for consumption among the various sawmills at Indiantown, Straight Shore, Portland, and Carleton. Messrs. G. & Otty Bagnall have been awarded the contract for the scaling of the lumber. Reports from other points show that business in the woods this winter will be carried on with as large extent as possible.

Muskoka.

The Medora correspondent of the Muskoka *Herald* says :—Lumbering is very brisk, both on islands and on mainland How is it that people who buy islands can take off the pine free of stumpage dues. One island in this township was bought for about $270, and the pine alone on it sold for $3,500, or something like that ;—not a bad speculation. The beauty of the lake will soon be a thing of the past, if this stripping of islands goes on much longer.

Last week's *Star* contains the following :—"The Parry Sound Lumber Company's Mill was shut down for the season last Saturday, owing to the weather. It was the intention of the Company to have kept the mill running for some time yet. The season's cut has been very large, reaching close to sixteen million feet. Taken altogether this has been the best season for the lumber trade for many years. How the next season will turn out it is hard to say. Wages and supplies are higher and, from present indications, the weather threatens to be very severe and the snow unusually deep. This will, of course, increase the cost of production of timber, and the prices will have to remain at a good figure in order to make it pay."

The Upper Ottawa.

A reliable correspondent sends us the following estimate of the quantity of square pine being got out on the upper Ottawa and tributaries this winter :

	Cubic Feet
Alexander Fraser	800 000
British Canada Lumber Co	600 000
David Moore	550 000
P. McLaren	450 000
B. Caldwell	450 000
McLachlin Bros	400 000
A & P. White	300 000
J. R. Booth	300 000
L Banque Nationale	250 000
Tuistle, Francis & Co	250 000
Allan Grant	250 000
Wm. Mackey	250 000
A. Barnet	250 000
Jas. MacLaren & Co	200 000
O Latour	200 000
J. & G Bryson	200 000
Gillies Bros	150 000
Hilliard & Dickson	150 000
L. White	150 000
R & J. Klock	100 000
Bell & Hickey	100 000
Jas. Bonfield	100 000
R. Campbell	100 000
Jas. Findlay	100 900
J. T. Brown	100 000
Other firms, say	600 000
Total	7 350 000

MINING NOTES.

Extensive operations will be carried on in the Mississippi mine this winter. Four steam drills were taken out to the works on Saturday, which will be placed in position at once.—Smith's Falls *News*.

Mr. Hall, from the Fifteen Mile Stream gold district, is in town, having brought with him three bricks of gold. Each brick weighs over one hundred ounces, and the whole is the result of the labour of seven men for three months.—*Halifax Exchange, Dec.* 2.

Important discoveries of gold and silver quartz ledges have been made in Nasse river in the vicinity of Alaska. Specimens which have been shown in town are very rich. The miners think that the ledges are located in British territory, but they are very near the boundary line.

Three men were seriously injured last week at the Hull iron mines, in the employ of Col. Robbins. When about leaving for the day a large piece of ore fell from the shaft, some eighty feet, Angus McMillan and Michael were so seriously injured that their recovery is doubtful.

A private letter received at Ottawa from New York city announces the arrival of another party of French capitalists, who visit this continent to seek a field for investment in mines. Efforts are being made by gentlemen here to induce them to visit the valuable mining properties in different parts of the Dominion before returning to France.

Railway land has lately taken a jump, and is held at stiff prices. Belt "E" land now brings $2 above the Government price, or $2.90 per acre. Good sales are frequently made; Mr. J. I. Johnston, last week, sold 480 acres in the Pembina Mountain district to an Ontario gentleman for $1,600.—*Emerson International.*

Mr. Antoine Gaudaur has returned to Coboconk, from the north where he has been for the past six weeks making an estimate of the timber lately come into the hands of the Toronto bank. We understand the report is favourable for the bank and that there is no doubt but we shall have another mill running here next summer.

Sitka (Ala.) advices state that the town was visited by a severe cyclone and a heavy shock of earthquake on Oct. 25th. The wharf was wrecked, and many roofs and fences demolished. A party of miners returned from the interior of Alaska and the head waters of the Yukon River report finding numerous gold deposits and indications of rich placers. Another expedition will go out next season.

The Smith's Falls *News*, correspondent says:—Mr. M. Norris, foreman for a smelting works company at Port Leyden, Jefferson county, N. Y., has been here looking for men to fire. He offers sixty-five cents for chopping hemlock into cordwood to be converted into charcoal for smelting purposes—this is without board. This is a good chance for the number of unemployed young men to be seen almost everywhere.

The Perth *Expositor* understands that Mr. Boyd Caldwell has received an offer of forty thousand dollars for his iron mine in Lavant. It is undoubtedly a fine deposit, and when the Kingston & Pembroke Railway is extended to Renfrew, it will be within a convenient distance for shipping. The Kingston & Pembroke Railway will develop an excellent mining and lumbering district, and we hope soon to see it extended to Renfrew.

Mr. A. A. McLachlin, Coboconk, has sent some samples of stone to Toronto to be tested there as to its suitability for foundations for the new permanent buildings. I am told that they are the strongest of twenty-two varieties received. The same gentleman is also forming a syndicate for the working of an iron mine near Gull Lake. I am told lithographic stone is to be quarried in the spring and that phosphate mining will be one of our next year's industries. If all those expectations are realized Coboconk will leap from its present lethargic state to a position of provincial prominence.

A Kingston paper says:—Aarrangements are nearly completed for the establishment of a new industry—the manufacture of charcoal and iron. It is not definitely known where it will be located, but it is likely that a position convenient to the Mississippi mines will be chosen. The company has been organized, and is composed of some of the wealthiest citizens. It is intended to commence operations with a capital of $40,000, merely manufacturing charcoal blooms at first, but if the undertaking proves a success, the capital will be largely increased, and operations extended to the manufacture of bar iron, Canada plate, and boiler plate.

The *Sentinel-Star* says that on Monday afternoon Mr. Robert Elliot, who has been working in Madoc all summer, left at this office specimens of the fossilized wood now being mined at that place. The specimen he procured for Dr. Hanel, science master is at Victoria college, but the curious can see them at this office for a day or two. Mr. Elliot states that the material in the mine has the appearance as if a forest once stood there and that the trees had been prostrated by a hurricane, which is probably the way the deposit occurred. This wood, which has been "turned to stone," is mined in large quantities, and is sent to the other side where it is ground and made into a fire-proof paint, a peculiarity of it being that fire has no effect upon it.

Mr. Church, who recently returned from the new gold fields north of Lake Superior, reports to the *North Shore Miner* that he traced the course of the vein for six miles, and it had an average breadth of from 35 to 40 feet. A recent assay showed a yield of $24 16 of gold and silver to the ton of quartz. Mr. Church, the discoverer, has spent over ten years in California, and feels warranted in saying that this newly discovered mineral country bids fair to rival any gold region he has ever seen. The topography of the district is briefly described as rocky and undulating, well timbered with white and pitch pine, birch, balsam, and tamarac. Soil mostly of sandy loam. The scenery is also very fine. Several rapid streams traverse the location, and near the vein is a water-fall of great force, that will at no distant day be made to combine the useful with the beautiful.

A writer in the Picton (N. S.) *Standard* calls attention to the advantages offered by that locality for the iron industry. The qualities of the different ores, the nearness of coal and lime, and the facilities of transit, make the future of mining and manufacturing operations very promising in Hopewell and neighbourhood, a few miles from Pictou, where the writer thinks there is the making of a Carron, or a Merthyr Tydoil. In view of the fact that steel rails are being largely imported into the United States, just because the demand exceeds the supply, and the enormous requirements of the Pacific Railway, it is claimed that the ability of the Pictou's iron region should not be overlooked. An outlay of two millions in the home manufacture of the rails required for the Canadian Pacific would eventually be the saving of five. It is urged that a representation should be made to the Canadian Syndicate of Nova Scotia's prospects, and an inspection invited, with a view to their appropriation.

Closed for the Season.

The *Lumberman Gazette*, Bay City, remarking on the sudden change to winter weather, says:—"Nothitstanding the premature closing of the sawing season, by which the the cut has been curtailed some 20,000,000 feet, the umber product of the Saginaw valley for the season of 1880 will be found exceeding ly large. The estimates made by some of the mills which have shut down show that there has been a large increase over 1879 The product of 1880, in this district, will not be far from 775 000,000 feet, an increase over last year of 50 000.000 feet. It seems probable that notwithstanding the large shipments of the season there will be left over unsold a larger amount of lumber than at the close of the season of 1879. It will be of the coarser grades which have been slow of sale. Should it be as much of a drug next year as this the accumulation may have a depressing effect on the market. The proper way to prevent such an outcome is to exercise more care in the select on of timber this winter, to the end that a better quality of stock may be secured for next season's cutting. Taken all in all, however, the season of 1880 will be regarded by the manufacturers of lumber as one of unvarying success. The average price realized has been nearly two dollars per thousand feet greater than that of last year, while the addition l cost of manufacture has not been to exceed fifty cents. Of course the increasing value of stumpage must be considered when profits are being counted. The sea on closes prematurely, but not much fault will be found therewith, as the result will be to merely transfer operations in the woods.

LUMBER NOTES.

The shipments of lumber from Minneapolis from Jan. 1st, and including Nov. 6th, 1880 was 144 290.000 feet; same time last year 129,050, feet; same time in 1878, 108,730 000.

The Alpena pioneer says: The late storm made the lumbermen look blue. Many of them had their yards full of lumber to ship, and their booms full of logs to cut, and it looked as if thousands of dollars needed in their winters work would lie in the booms and on the piles.

A black ash tree with beautifully figured grain, cut in Western Ontario, when cut up sold in New York for $3 000. The stump sold for another $100. The product was used for veneering.

The N. Ludington company's mill at Marinette, Wis., has run 195 days this season, cutting 25 000.000 feet of lumber, 6 250,000 shingles, 4.500,000 lath and 1,000,000 pickets. The company has seven camps, employing 175 men, in the woods.

During the past season the Tittabassee boom company has rafted 3,994 997 pieces against 3 217 640 pieces for 1879. It is estimate that the number of feet will reach 575,000,000. The tootings are not completed. For the season of '79, 445,000,000 feet were rafted.

Business in the district (says the Albany *Argus*) has closed for the season of 1880. Many of the trade have already left the District and taken up their winter quarters in their city offices. It is estimated that of pine lumber there is at least 15,000,000 feet sold which will be wintered over here, of which about 5,000,000 is afloat. Of hard wood from 300 000 to 350,000 feet have been sold, but not delivered; some of it will go forward during the winter. It is estimated that between Albany and Whitehall there are thirty-five boat loads of coarse lumber frozen in on the Champlain Canal bound to Albany. Shipments are being made by rail to New York and South.

The *Northwestern Lumberman* says:—"We are not alone in our suprise at the outcome of the log crop of Michigan for the winter of 1879-80, which was legitimately supposed to have been much curtailed in consequence of the unfavourable character of the winter for logging purposes. A less favourable winter for getting in logs than was the last could scarcely have been imagined by the lumberman who were engaged in the business. Logs cut as long ago as ten years have been received in quantites, while those cut six or eight years ago, and with marks long since out of record, have come equally free in quantity. The amount of rain which has fallen during the summer has kept the rivers of Michigan during nearly the entire season at a driving stage of water, and the opportunity has been improved to sack the shores of the rivers of the logs which year after year have accumulated.

The Kennebec, (Me.) lumbermen are very active now in preparing for their winter operations. Some have already sent in small crews, S. A. Nye having a crew on No. 3 one week. Messrs. N. Torman & Sons, E. Totman & Co., and A. H. & C. E. Duren, will start a portion of their crews this week, the remainder to follow later in the season. The total amount of cuts will be about 14,000,000 feet, divided among the different firms about as follows: E. Totman & Co 4,000,000; N. Totman & Sons, 4,500 000; S. A. Nye from 25,00,000 to 3.000 000; H. & C. E. Duren, 2,000 000. A large number of men and teams will be employed. A large number of firms had a large portion of their last year's cut left in the river, the water being so low that they were unable to drive them. These, together with their present operations, will make business lively next season.

The English papers tell of a priest near Tralee, Ireland, who made his congregation, at two masses, promise on their knees not to imbrue their hands in the blood of one of his parishioners—a large land agent.

Ohio, now the second coal State in the country, will mine over 7,000 000 tons this year, against 6,427,379 in the year ending the 31st of last May. Four new fields have been opened this year—Calton in Jackson county, Corning, in which Governor Foster is interested, in the Sunday creek valley, Del Roy in Carroll county, and Wheeling Bank, along the extension of the Cleveland, Tuscaroras Valley, and Wheeling road.

MILLING NOTES.

Last week a shipment of 1200 barrels of flour was sent from Guelph to Mr. Gibson the extensive lumber merchant on the St. John River, New Brunswick.

There were received at Collingwood during the season of navigation 3,868,455 bushels of corn and 633 410 bushels of wheat, making a total of 5,501,884 bushels.

A new mill has been opened at Woodbridge, Ont., by Mr. William Mackie, which is known as a "woollen extract mill." He purposes utilizing old carpets, old coats or dresses, or any articles containing wool, by a process which separates the woolen from the other fibre in mixed goods. The wool so obtained is to be used in making a variety of fabrics.

The receipts of grain and flour, reduced to bushels, at Buffalo, from the opening of navigation to November 1st, according to the Buffalo *Commercial Advertiser*, amounted to 100,000,000 bushels, or 50 per cent. more than for the corresponding period last year, and 37 per cent. more than the largest amount received in any preceding year. The larger part of the grain was forwarded east by canal, the amounts so shipped being 63,289.404 bushels, against 46 845 194 bushels in 1879 and 53,238,725 bushels in 1878. More grain was received during October than in any other month, the quantity being 16,186,000 barrels of flour. 25,100,000 bushels of wheat, and 35,250,000 bushels of corn, against 3,863 barrels of flour. 25,100 000 bushels of wheat, and 10 000 000 bushels of corn last year. The *Advertiser* adds that, "to have transported the 73,350,000 bushels of grain and 18,000 barrels of flour by rail, would have taken 35 trains of 20 cars each per day for six months, including Sundays."—*Bradstreet.*

HALIFAX AND THE GRAIN TRADE.

Sir Charles Tupper, in reply to a letter of Mr. Doull, President of the Halifax Chamber of Commerce, states that if an experiment now being made should succeed, the Government will submit to Parliament a proposal to erect an elevator in that city. Two cargoes are to be sent over the Intercolonial Railway to test the practicability of sending produce by this route. In proposing to erect an elevator, the government goes very far; and the only justification for the step, is that the shipping of grain by this route is yet in the experimental stage. In most cities, elevators are provided by private enterprise; but capitalists are here not willing to risk anything on the success of a business which has yet to be established. It is only in the exent of the experiment now being tried proving successful that the government is to build an elevator. Will two cargoes furnish sufficient experience to draw a conclusion from? If Halifax capitalists had no doubt on this point, it would be strange if they threw away the chance of the profits which an elevator might be expected to make. There is probably a more brilliant future in store for Halifax than its citizens believe. It becomes them, we think, to be more self-reliant and enterprising. The Winter terminus of the Pacific Railway on the Atlantic must become a city of great importance.

THE UNITED STATES' WHEAT CROP.

Bradstreet's final summary of the wheat yield for 1880 for the entire wheat growing regions of the United States is as follows:—Western States, 323 675 000 bushels; Pacific coast, including Washington Territory, 39 300 000 bushels; Southern States, 41.929,000; Middle States 36 595,000; Colorado and Territories, 12 850,000; New England, 1,100 000; grand total, 455 649 000. The needs of the country for food, seed, etc., is placed at 265,000 000 bushels. On this basis there will be left a margin of 190,724,000 bushels for export to supply the deficiencies—Switzerland, Spain and Portugal, 6 000,000 bushels; Italy, 5,000,000; Great Britain, 120,000,000; France, 42,000 000; Holland and Belgium, 14,500 000; Germany, 20,000,000; West and East Indies and Central and South America, 2,000,000.; total, 327,500 000 bushels. Apparent surplus production, 27 250,000 bushels. The wheat crop of 1880, as estimated by the Department of Agriculture, amounts to 480,849,723 bushels, against 448,755,118 bushels last year.

They have a new way of curing women's hysterics in India. They tie the patients hands and feet together and then thrust cotton wicks steeped in oil up their nostrils and into her ears. A woman who has had hysterical dumbness will recover her speech in a very short time under this treatment.

AN ENGLISH WAR CORRESPONDENT.

"Archibald Forbes once a private soldier? Then his origin must have been very humble and his education self-acquired." Not so fast, good readers. There are those who have poverty thrust upon them, and others who thrust poverty upon themselves. I am afraid Archibald Forbes belonged to the latter class. His father, Louis Forbes, was a Presbyterian Doctor of Divinity, while his mother belonged to the old family of Leslie. Living in the north of Scotland, Forbes studied first at school, then with a tutor, and finally at the Aberdeen university. Though excelling in classics, he had such an aversion to mathematics that when the senatus academicus recently proposed to confer upon him the degree of LL. D., an irate professor exclaimed:

"I can never consent to such a mockery. As a student Mr. Forbes was 'ploughed' in mathematics. I shall never consent that a man should receive an honorary degree from this university who has failed to pass his examinations."

Fortunately for Forbes, success on the battle-field does not depend upon the appendix of LL. D.

During Forbes' second collegiate year, his father dropped dead in his pulpit. There being nine children, and little fortune, Archibald left Aberdeen for Edinburgh, with designs first upon the law, and secondly upon the church. While endeavouring to decide upon a career, he spent all his money, and fell in love with a young lady, with whom he arranged to elope in a gig on a certain Sunday when the obdurate father was to be at church. Alas, "the best-laid schemes o' mice and men gang aft a-gley?" The obdurate father waylaid our hero, remonstrated with practical determination, and turned the love-lorn youth into a ditch, whence he arose sadder and wetter.

Attaining his majority in 1850, Forbes became possessed of $2,500, and determined to join a cousin in Canada who owned a large tract of land near Lake Huron. On reaching Quebec, he lingered in the old town, held by the beaming eyes of his landlord's daughter. At the end of three months, the wild Scotchman had exhausted his resources, confessed his poverty to the landlord's daughter, and abandoned the idea of joining his cousin. With eight shillings in his pocket, he shipped for home as a sailor, and steered twelve hours a day for weeks, when his vessel became water-logged. No timber-ship can sink, otherwise Forbes would have gone to the bottom. There was no cooking for a week, life being maintained on biscuits and salt meat. After several sailors had been washed overboard, the crew took to the boat, which was picked up by the cotton ship Moses Taylor, from New Orleans. Finding that the crew were sadly diseased, Forbes, who had studied medicine *en amateur*, got out the medicine-chest, killed one patient and cured the rest. Of course his susceptible heart fell a prey to the captain's daughter, upon whom, when bidding her farewell in Liverpool, after three month's taste of salt water, he squandered his last eight shillings in grapes.

What was to be done? Never without resource, Forbes sold a fine field-glass, and, with the money, went to London, where he was recruited in the Royal Dragoons. Despite his tendency to "larks," he made rapid headway. In addition to his appointment as school-teacher to his company, Forbes was made acting-quartermaster-sergeant, without the rank of sergeant, is he happened to be the only man of his company who could solve the following stupendous problem in mental arithmetic,—"If one man is allowed the thirty-seventh part of an ounce of pepper per day, what is the amount to be drawn for two hundred men per week." Having compassed this, Forbes was let off from punishment drills, and became an object of admiration to his companions. Already articles by him had been accepted for "Household Words" and the "Cornhill Magazine." Shortly after, he competed for a prize essay of fifteen guineas, to be written by a working-man, "On the advantages the mother-country derives from her colonies." He was then stationed at Weedon, where libraries are conspicuously absent, and as he knew nothing about the colonies, how could he obtain dates? Discovering an old encyclopædia, he collected his material from it, wrote his essay, and secured the prize!

Owing to literary earnings, Forbes had more money than his fellows, and consequently got into frequent trouble. His colonel—now General Wardlaw—was a strict disciplinarian, and meted out punishment unflinchingly. Toward the end of his military career, which lasted five years, Forbes bore a very good character—a happy change, which would probably have led to promotion had not his health given way and caused him to be invalided. After enduring ignorant army-hospital treatment for eighteen months, he went to London, got well in six weeks, and was then sent to Aldershot to show the military surgeons how easy had been his cure.

In losing an obstreperous soldier, England gained a new species of correspondence. Forbes's first contribution to journalism was published in 1865, in the "Evening Star." He became a casual writer on the "Morning Advertiser," and once received eighteen pence for a paragraph accepted by the "Daily News." On this promising income he married; after publishing an article in the "Cornhill" on "Army Reform," and another in "St. Paul," entitled "Soldiers' Wives," both of which were well received, Forbes started a paper called the "London Scotsman," intended like every other newspaper, to fill an aching void. It provided Scotchmen with condensed news from their own country, but as they either failed to see its necessity, or expected to get it for nothing, the editor did not amass a fortune. He eked out a precarious existence by occasional dramatic and musical criticism contributed to the "Morning Advertiser."

Unfortunately for art, Forbes is not the only example of the wrong man in the wrong place. When sent to pronounce upon the merits of a performer on the pedal pianoforte, the ex-soldier regarded the artist from a gymnastic point of view and praised him as an acrobat!

On the breaking-out of the Franco-German war, Forbes was engaged in writing a novel for his paper, while cherishing the idea that nature had designed him for war correspondence, an idea he communicated to James Grant, editor of the "Morning Advertiser," who soon after said to him:

"I've concluded to offer you a position as war correspondent. Choose whichever side you prefer,"

Having studied German tactics, acquired a slight knowledge of the German language, and feeling sure that the German eagle would win, the ex soldier-editor went direct to Saarbruck, and witnessed the "baptism by fire," on August 2, 1870. It is strange that he should have beheld the defeat at Sedan, seen Louis Napoleon dead at Chiselhurst, and his son dead in Africa.

At Saarbruck, Forbes helped to save the life of Major Battye, who belonged to the celebrated Indian Guides, and has since been killed in Afghanistan. Following the Germans as a spectator, Major Battye lost his temper on seeing a soldier killed beside him. Seizing the dead man's needle-gun, he opened upon the French, and promptly received a chassepot bullet in the ribs. Forbes picked up the impetuous major, carried him to a place of safety, and temporarily repaired him by encasing him in brown paper plastered over with paste.

Present at the battles of Courcelles, Vionville, and Gravelotte, Forbes advanced with the Germans to Paris. He and his companions were so far forward as to be ignorant of the flank movement to the right which ended in the battle of Sedan, and held on their way alone through Chalons until actually warned by the French in the street to be careful or they would fall into the hands of the Germans, who had been seen in the neighbourhood. Recover touch of the Germans, Forbes was under fire the entire day, and the next morning witnessed Napoleon's surrender to Bismarck. He and his young Dutch companion, De Liefde, were the only civilians who witnessed the historic event.

On the night of the day Napoleon left for Wilhelmshoho, Forbes and De Liefde, being unable to find quarters elsewhere, asked for lodging in the Chateau Bellevue, which had been the ex emperor's temporary residence. Their request was granted but without food. While Forbes was writing his despatch on the table on which the capitulation had been signed, De Liefde sat gnawing a ham-bone taken from their own stores. Failing by this means to appease a ravenous appetite, he threw the bone in disgust upon the table, and upset Forbes's ink. On returning to the Chateau, three months later, Forbes was gravely shown the stain of his own ink as a souvenir of the capitulation! The French commander had upset the bottle in his rage at Moltke's exorbitant demands! It was then that De Liefde and Forbes tossed for the right to sleep in the ex-Emperor's bed. The ever lucky Forbes won. On a little table by the bed, with leaf turned down, was the book which Napoleon had read before going to sleep,—Bulwer's "Last of the Barons!"

Forbes was the first non-combatant to ride round Paris before the city was entirely invested, and while waiting at Meaux for the progress of the environment, he received orders to return home. The "Morning Advertiser" no longer required his services, for the quaint reason that this journal already had a correspondent inside of a city which was about to be beseiged! Forbes reached London in three days, sole possessor of information concerning French plans. As his essay in war correspondence had abruptly ended in recall, he concluded to return to his miserable "London Scotsman." However, he determined, if possible, to sell his knowledge. As "The Times" turned a deaf ear to his application, Forbes stood in Fleet street, and tossed "odd man out," to which of three papers—"Daily News," "Standard," and "Telegraph"—he should go with his copy. The "Daily News" won the toss. He found favour at last, and was told to write three columns. On returning to the office to state that the subject was not yet exhausted, the editor replied:

"Write on, then, until it is. We'll take as much as you like of *this* kind of copy."

Forbes wrote six columns and arranged for another article to appear the day after, but when he presented his second manuscript the manager said:

"I don't think we want it."

The tone greatly irritated the already jaundiced Forbes, who politely requested Mr. Robinson "to go to the devil," and then proceeded to go elsewhere himself. Chasing the correspondent up the street, the manager finally overtook and calmed him by the magic announcement:

"I want you to go to Metz to-night for us."

It was four o'clock in the afternoon: Forbes left three hours later. This was his first engagement upon a journal with which he has been connected ever since."

At Metz Forbes began to revolutionize war correspondence by living on foreposts, witnessing every fight, and substituting for curt telegrams of bare facts, long descriptive letters telegraphed in full. According to Forbes, successful war correspondence depends upon three attributes:—faculty of organization, capacity of physical endurance, and the gift of lucid writing, resulting from studiously acquired military knowledge. From a journalistic as well as from a military point of view, the base of a campaign must be secure; open communication and presence in the right place are indispensable. Forbes seems to sniff a battle afar off, and is ready to live in squalor, as he did for six weeks within easy range of French cannon before Metz capitulated. It was the wettest autumn on record, and typhoid fever and dysentery were his constant companions. During a sortie, Forbes received a flesh wound in the leg which continued open for months, but which did not force him to leave the front. For these six weeks he did not sleep in a bed except on occasional visits to the telegraphic base at Saarbruck. Before the capitulation was effected, he was the first to enter Metz, and informally joining the sanitary volunteers, he devoted himself to the removal of sick and wounded, 2000 of whom were in a state of semi-putrefaction. As the most infectious disorders reigned, including the rare type of fluury typhus, Forbes's leg was attacked with gangrene, which had to be burned out with nitric acid. By constant smoking, never removing his boots, and carrying in his mouth a sponge saturated with vinegar, he managed to keep on his legs, but was finally ordered to England, lest, by a longer stay in so foul an atmosphere, amputation should become necessary.

On reaching London, Forbes showed his disabled leg to Mr. Robinson, who remarked with a shudder:

"As a fellow-man, I say you ought to lay up for six months; as a newspaper manager, I wish you would start for the seige of Paris to-night."

Forbes started immediately, and his leg got well, probably owing partly to his rule of being a teetotaler seven days out of twenty-one. Attached to the head-quarters of the army commanded by the Crown Prince of Saxony, Forbes witnessed the hardest fighting of the siege. After the final bombardment of St. Denis, he contrived to get inside the walls, which had been reduced to a most dilapidated condition, and was offered food by a Protestant pastor. The meat consisted of part of a young gray horse that had been killed by a shell.

During the siege, Forbes wrote letters in full, which were sent to an agent on the frontier, who telegraphed them to London. This feat excited great surprise among the Germans, who knew that Forbes had permission from the Crown Prince to telegraph only short messages from the offices within his army. One day a Forbes telegram appeared dated at a place where there was no telegraph office. It was reported to Prince George of Saxony's staff by a jealous correspondent.

That same night, Forbes dined with this staff, and was asked to explain the incomprehensible.

"Why," he replied, jestingly, "I have my own private wire, and shall telegraph from here directly."

Knowing that orders had been given at Prince George's office to receive no telegram that night from him, Forbes quietly wrote a letter directed to his frontier agent, and put it in the post. The next day, it was telegraphed to London, and copies of the "Daily News" were sent to Prince George with Mr. Forbes' compliments.

Pending the capitulation of Paris in February, 1871, some fifty journalists waited hungrily to enter on the side of Versailles. Forbes arranged to enter by the north, through St. Denis, and accomplished his purpose on horseback, dressed as a Prussian, and was, in consequence, very nearly killed by a drunken National Guard. Having little knowledge of French and no knowledge whatever of Paris, he had great difficulty in finding Mr. Washburne's bureau, where sat Colonel Hoffman, who gazed with surprise upon the first man he had seen from the exterior world. He sent the stranger to Unthank's English Hotel, in the Faubourg St. Honore, the only hotel open during the siege. Forbes brought forth from his wallet five pounds of sliced ham, which Unthank's people put on a large covered plate and exhibited in the Faubourg at ten centimes a peep, as the first outside marketing to enter Paris.

After walking about dark streets all night, Forbes, who had stabled his horse without leave, rode to Vincennes, where he passed the Prussian lines. He then galloped fifteen miles to Lagny, the terminus of the German railroad system, which he reached in time to catch the train for Germany, but killed his poor horse in the effort. On went the war correspondent for twenty-two hours, without stopping. Reaching Carlsruhe at two o'clock in the morning, he made his way to the telegraph-office, where the two girls in charge refused to take a long telegram until day set in. Coaxing and bribery, however, accomplished their purpose. At eight o'clock the despatch was finished which gave the first details of the interior of Paris that had reached England for a week. Taking the next train to Paris, Forbes entered the Hotel Chatham on the morning of the third day after his departure, and was roundly chaffed for his delay by two journalists who had just got in. Fancy their feelings on reading the "Daily News"! Couriers were so untrustworthy that it was not unusual for Forbes to carry news to England twice a week. He was often the only passenger, and nearly died from fatigue.

After witnessing the great parade at Longchamps, Forbes on the same day accompanied the German troops into Paris. Leaving the German cordon and entering that part of the town still in French hands, he was assailed by the mob as a German spy. A fight ensued, in which Forbes's clothes were torn off. "Let us drown him!" shouted the mob, who threw him on the ground and proceeded to drag him over the stone streets. Rescued by a National Guard picket, the supposed spy was taken to a police-station, and brought before a magistrate whose sister spoke English, and who testified her belief in Forbes's representations. On being released, Forbes borrowed apparel from the brother of his benefactor, who accompanied him to his hotel. "How can I repay you for all that you have done for me?" asked the correspondent. "More easily than you think," replied the Frenchwoman. "My brother and I are literally starving. He has received no salary for six months, and, as gentlefolk, we cannot stand in the queue with the populace to receive alms. Doubtless you know persons connected with the distribution of England's gift. Any food will be a godsend." As one of the

English Almoners happened to be staying at Forbes' hotel, a hamper was dispatched to the Frenchwoman, who went away sobbing like a child. That same night, Forbes started for England, and wrote his account of the entrance into Paris before he had washed the blood-stains from his head and hands. This account appeared in a special edition of the "Daily News," and the next morning Mr. Robinson found his correspondent asleep on the floor with the London Directory for a pillow.

On returning to Paris, just as the Commune was collapsing, Forbes entered by La Chappelle gate, and the same afternoon reached Dombrowski in Chateau La Muette. While dining, the report came that the Versaillists had forced the Porte de la Muette. Desperate fighting ensued, during which Dombrowski, who had mounted a wall, was wounded, and fell into Forbes's arms. All then ran away. The next morning, Forbes was "requisitioned" by the Communists to aid in erecting a barricade across the Rue Rivoli, and again, later in the day, to defend an indefensible position, the defenders of which promptly disappeared. Some hours after, Forbes stood behind shelter in Rue LaFayette and watched the Versaillists take the Grand Opera House. There followed a pandemonium of indiscriminate slaughter. Unable to communicate with England, Forbes got out of Paris with great difficulty, and brought to London the news that Paris was in flames. He returned to the distracted city in time to witness the final down'all of the Communards in the slums of Bellevue and in Pere la Chaise.

On the abdication of King Amadeus, Forbes visited Spain to watch the new republic, the difficulty of directing which was materially enhanced by the purity of its leaders. They would neither bribe nor be bribed, and without bribery no government can live in Spain. Castelar is a dreamer whose aspirations are too good for this work-a-day world. Figueras resigned because, by his own confession, he had not iron enough in his system to be a leader of men. Finding the republic a myth, Forbes, in 1872, went in search of the civil war in Catalonia, and found Contreras in command of the Republican troops at Barcelona. This fat scoundrel, who in a carriage looked as broad as he was long, afterward conducted the communistic insurrection in Carthagena, when a penny post-man and a shoe-maker were joint presidents. Forbes tried to induce Contreras to march against the Carlists, and finally the fat commander succeeded in getting his army one day's march out of Barcelona, on the conclusion of which feat the army triumphantly mutinied, and were gloriously marched back. Disgusted with Contreras, Forbes underwent four months of bushwhacking with the Carlists, whom he found personally pleasanter than the royalists. They had little fighting capacity, but died like gentlemen.

Returning to England, Forbes suggested the Ashantee war in a letter to the "Daily News," his propositions being carried out immediately, and their utility being unofficially acknowledged by military magnates. Bad health prevented the inventor of this war from reporting it.

In the beginning of 1874, a famine desolated Tirboot, a densely populated district of Bengal, where the people swarm like flies. Forbes passed the summer among these miserable people, numbers of whom died, though $15,000,000 were expended in mitigating the horrors of the situation. One great difficulty in preventing starvation arose from the existence of caste. No food cooked by one caste could be eaten by another. Forbes saw a woman come to a trough for food who, on observing that the people handling this food were of inferior caste to herself, lay down and died with her infant in her arms!

After receiving a sunstroke from which he lay insensible for two days, Forbes returned home after eight months' absence. He became cognizant of the intrigue for the restoration of Prince Alfonso of Spain, who was then a boyish fellow, and a fine rider, with a certain dignity, and a certain amount of ready brains. Accompanying Alfonso to Madrid, Forbes assisted at the coronation and followed the king to Navarre in pursuit of Carlists, who were finally paid to give up a lost cause.

Gladly leaving the land of hidalgos, in August, 1875, Forbes went with the Prince of Wales through India, where life was made up of pageants that unrolled themselves like gorgeous panoramas, and displayed the jealousies of native princes who quarrelled about precedence, scowled, sulked, and even went away altogether. But, though these princes hated each other, they learned to esteem the Prince of Wales, whose manners toward them were irreproachable. He combined tact with dignity, and always did the right thing at the right time. According to Forbes, England's hold on India would not be worth a month's purchase but for military rule. All save traders, detest the English, and they are only friendly through interest. British military rule is a semi-depotism, not always wisely directed

April, 1876, found Forbes again in England, but the breaking out of the Servian war caused him to join General Tchernayeff, a Russian Schlavophil who undertook to organize the Servian militia, and accomplished wonders. By presenting a bold front and throwing up earth-works, he so impressed the Turks with a belief in Servian strength that a war which should have ended in a fortnight was prolonged four months. More than one narrow escape from capture and death served to keep Forbes on the alert, while life in camp was curious enough. On the approach of winter, officers and men were quartered in holes excavated in the ground and covered over with sod. Piled up in the centre of each subterranean camp was a huge fire round which all slept. Mice that nibbled hair and whiskers were frequent companions,—not to mention less agreeable vermin. Forbes brought to Belgrade the tidings of the Servian collapse, having on this occasion seen a battle that lasted nine hours, travelled by post 150 miles, and telegraphed four columns to the "Daily News" in thirty-four hours.

In the spring of 1877, Forbes joined the Russian army in the campaign against the Turks, and, owing to Russian secretiveness, was sorely puzzled to learn where the Danube would be crossed. Thanks to Prince Mirski, who gave him a hint, he was the only English correspondent who solved the problem, and hurrying to Bucharest with the news, again did his journal great credit. Sole English correspondent present at the murderous and disastrous Russian assault on Plevna, in July, 1877, Forbes was decorated with the order of Stanislaus for personal intrepidity in rescuing the Russian wounded. By desperately riding his horse to death, Forbes reached Bucharest—a distance of 100 miles—the day after the battle, and telegraphed eight columns of description, which appeared in the "Daily News" of the following morning. For sixty hours he underwent continuous physical and mental exertion, almost without food and entirely without sleep. The narrative telegraphed to London bore so hard on the Russians, that all anticipated the writer's expulsion from the Muscovite army. Recognizing the truth, however, of the English account, the Russian military leaders instructed their press to accept it as accurate.

Again, having witnessed the fight at Shipka Pass, and being convinced that the Russians could hold their position, Forbes quitted the scene of combat at six o'clock in the evening, on the return journey to Bucharest, and riding all night reached the imperial head-quarters the next morning, having outstripped the Russian couriers. Taken before the Emperor, who was anxious and careworn, and very shabbily dressed, Forbes gave him all the information at his command, and was warmly thanked for his promptitude. Radetsky had exclaimed at Shipka Pass: "I've got this place, and, please God, I'll keep it as long as I'm alive." Forbes assured the Emperor that the Pass *would* be held; but as reports of a different nature reached head-quarters during the day, Forbes passed more than one *mauvais quart d'heure*, the German military *attache* of the imperial staff assuring the Emperor that Forbes had led them astray. At last news came that corroborated his statements, whereupon the Emperor turned upon Major Lignitz, exclaiming:

"You were wrong. I believe Ignatieff's Englishman is the only man among you who knows anything about war."

Forbes and MacGahan shared between them the descriptions of the September attacks on Plevna, which lasted five days. At their conclusion, Forbes, shattered by exposure, fatigue, and fever, abandoned the field and nearly died at Bucharest. He left the interest of the "Daily News" in charge of those two masters of war correspondence, H. A. MacGahan and F. D. Millet, both Americans and both peers of their English *confrere*. MacGahan died at his post, beloved by Bulgaria, whose wrongs he published to the world, and thereby righted; his death was deplored by friends and employers, as an irreparable loss to journalism. Millet accomplished wonderful feats, and lives to tell the tale in his American studio, where historic painting claims time once given to picturesque writing.

In the summer of 1878, Forbes went with Sir Garnet Wolsley to take possession of that pestiferous island, Cyprus, and, like everybody else, fell a victim to fever. Nevertheless, he contrived to be at Simla, in the Himalayas, shortly before the outbreak of the Afghan war, and at his own peril carried the first dispatches announcing success. The short telegram sent to the "Daily News" bore the date of ten o'clock, a.m. Ten minutes before ten, papers containing his dispatch were sold in Fleet street. The curious fact was due, of course, to the five hours' difference in the time between Asia and England.

Having eaten his Christmas dinner at Jelalabad, Forbes departed for Burmah, intending to interview young Thebaw, the noble Lord of the White Elephant, Monarch of the Golden Umbrella, etc., etc., who had then just attained the throne. He accomplished his mission one week before the young monarch massacred all his relatives. Accordingly, Forbes was accused by the Calcutta press of having gone to Mandalay for the purpose of bringing about this Christian catastrophe, and thus scoring a sensation! On his way down the Irrawaddy, Forbes read the telegram which recounted the disaster of Isandula, and in in an hour later received the curt order, "Go and do the Zulu war" He had a vague notion that the Zulus lived in South Africa, and a geographical friend in Rangoon told him that Durban was the seaport to make for. So for Durban he headed —away across India, from Calcutta to Lahore, from Lahore down the Indus to Kurrachee, from Kurrachee by steam to Aden, from Aden by steam to Zanzibar, and from Zanzibar again by steam down the south-eastern coast to Port Durban. Discovering at Ulandi that Lord Chelmsford was dispatching no immediate courier, the war correspondent started at sundown from the frontier, rode alone through a trackless country swarming with Zulus, and reached the telegraph-wire, a distance of 110 miles, in fifteen hours, whence he sent the earliest account of the victory to England, as well as to Sir Garnet Wolseley and Sir Bartle Frere. His report in the "Daily News" was read aloud in both Houses of Parliament, amid clamourous applause. Anxious to give details to Sir Garnet Wolsley, Forbes continued his ride to Petermaritzburg, 170 miles farther on, which he accomplished in thirty hours. The entire ride occupied ninety-six hours, three of which were given to sleep. All this was done by a man with a contusion on his leg, caused by a spent bullet received at Ulandi, which afterward suppurated, and compelled his return to England.

During his enforced vacations, Forbes has lectured on the Franco-German war and the Zulu campaign, and has by special invitation addressed the United Service Club, the highest military institution in England, on "Russian military operations in Bulgaria." On this occason the Duke of Cambridge paid him the compliment of offering to take the chair. While thanking the commander-in-chief, Forbes said that he would be more appropriate if his old colonel, now General Wardlaw, should preside. The General did so, and when the lecturer stated that he was proud to see in the chair a gallant officer who, in times long past, had more than once issued the stern edict, "Let that man have ten days' pack drill," the confession was greeted with shouts of laughter, in which General Wardlaw heartily joined, declaring, on rising to propose a vote of thanks, that he had no recollection of the little occurrences referred to, but if ever he *did* give Mr. Forbes punishment drill, it was doubtless most richly deserved.

Such is the the outline of Archibald Forbes's career—a true war correspondent, who thinks a fight the most exquisite delight in the world, and considers a complicated technical battle the most elevated enjoyment of which the human mind is capable

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A LITTLE boy, named Johnny, from the interior of the State, who had been raised on a stock ranche, and had heard a good deal about the consequences of stockmen killing yearlings that did not belong to them, came to Galveston to live. The other day Johnny's Sunday school teacher asked him: "Why did not Abraham offer up Isaac?" "Perhaps Isaac didn't belong to the old man's mark and brand."

THE advance sheets of Lord Beaconsfields new novel *Endymion* were recently laid before the Queen by his private secretary, Lord Rowton, for her opinion in relation to its treatment of political matters.

ITEMS OF INTEREST.

CYRUS W. FIELD, with his wife, son, and daughter-in-law, are going around the world. They will not go in eighty days—but in a steamboat.

ASTRONOMICALLY speaking, the orbits of the lordly turkey and cranberry sauce soon cross each other, and these two will then be in conjunction.

THE daughters of the Duke of Richmond are persistent and successful fisherwomen, and as catchers of salmon are said to be rivaling their countrymen.

THE estate of an English miser named Rhodes was lately wound up. It realized $390,000. The sale of his effects in his residence resulted in $28.75.

VERA SASSULITCH, the accomplished assassin of the Nihilists, should come to this country and lecture on "Kings I Have Tried to Shoot." We believe such a lecture would go off well.

AN Englishwoman who wrote to the London *Queen* to know what would be a suitable outfit for Nile travelling, was bidden to get a small riding whip, as the natives are sometimes very importunate, and nothing else would keep them off.

MALTA must be a paradise for habitual topers. In Valetta, the capital of the island, there is now a grog shop for every seventy-five inhabitants, including women and children. In addition to these there are, of course, the soldiers and sailors, who are the principal frequenters of many of these establishments.

LORD HENRY GORDON, brother of the Marquis of Huntly, and formerly of the firm of Newton, Gordon & Co., tobacco and general brokers, is a bankrupt. Lord Henry's grandfather, Lord Huntly, had the same sad fate, and the sheriffs occupied his house. The present peer, an able man of high character, repaired the fortunes of his family by marrying a Manchester millionaire's daughter.

Two sisters at Lackawaxen, P., were engaged to marry two brothers, and the double wedding was to take place about the holidays. Just before the election, one of the girls asked her lover to take her to a Republican meeting, but he, being a Democrat, refused. She appealed to his brother, a Republican, and he accompanied her. The sister who remained at home and the Democrat brother, finding their political sympathies in accord, agreed to break up the previous arrangement and become man and wife. The idea met with favour all round, and the wedding will take place accordingly, each of the four taking a different mate.

SOLOMON JONES of Bloomburg, Md., was 70 when, after many years of poverty, he received $2,000 in pension money. He had no relatives to leave it to when he died, and therefore made up his mind to spend it all himself. In view of the probably short time remaining to him in this world, he felt that he must be fast and furious in his pleasures, if he would spend the whole $2,000. He married a young wife, and gratified her love and dress; he got in a large stock of beverages, and drank them recklessly; he bought a fast horse, and bet on him. At the end of three months the last dollar was gone, his wife deserted him, his horse died, and he is still without any immediate prospect of dying.

Mechanical Invention.

It has been predicted that if mechanical invention should proceed during the next fifty years as it has in the last half century, machinery will supersede all physical and much mental labour. The evil part which it plays in our day is equivalent to the part which the slave labour and the spoils of conquest played in Rome. It is multiplying the indolent employments. Its automacy trains the man into a corresponding automacy which cuts down to a minimum the need of effort for subsistence. Its effectiveness has reduced the hours of labour from eighteen to ten with a rise of wages, and the labour is intermittent because gluts, strikes, and lock-outs alternately intervene. The terms of the struggle for existence are changing. Hard work is less required; Biddy declines service where there are no modern improvements, and Pat will soon follow by refusing to carry a hod without a lift. The upshot is that hard work which underlies striction is coming into disrepute, and raises the question whether we are becoming the victims of our ingenuity.

THE CANADA LUMBERMAN

AND MILLERS', MANUFACTURERS', AND MINERS' GAZETTE.

ISSUED SEMI-MONTHLY AT TORONTO, ONT.

A. BEGG, - Proprietor and Editor.

TERMS IN ADVANCE (Post-paid):

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One Copy six months..... 1 00

ADVERTISING RATES

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TORONTO, ONT., DECEMBER 15, 1880.

FOREST TREE CULTURE.

The Dominion Government has made wise provision for the planting in the prairies of the North-West Territories. The Deputy Minister of Interior, Col. Dennis, formerly Surveyor General, has devoted considerable attention to the subject, and has incorporated a code of regulations in the Dominion Lands' Act of 1879 of which the following is a synopsis:—Any person, male or female, being a subject of Her Majesty by birth or naturalization, and having attained the age of eighteen years, shall be entitled to be entered for one legal sub division, not in any case, however, exceeding one hundred and sixty acres, of unappropriated Dominion lands as a claim for forest tree planting On application for such entry the applicant shall pay an office fee of ten dollars for a sub-division of 160 acres; five dollars, if the sub-division be 80 acres; or $2.50 if 40 acres, which entitles the party to enter into possession of the land. The patent may issue on the expiration of eight years; but the land cannot be assigned during that time unless by the permission of the Department of the Interior. At the expiration of eight years, or at any time within five years after the expiration of the said term, the person who obtained the entry, or legal representation, shall receive a patent for the land so entered on proof to the satisfaction of the Local Agent:—1st.—That five acres of the land so entered, in case the same consists of a legal subdivision of one hundred and sixty acres, shall be broken or ploughed the first year after entry, and an equal quantity during the second year after entry; 2. That the five acres of the land entered which have been broken or ploughed during the first year, shall be cultivated to crop during the second year, and the five acres broken or ploughed during the second year shall be cultivated to crop during the third year; 3.—That the five acres broken or ploughed during the first year, and cultivated to crop during the second year as above provided, shall be planted in trees, tree-seeds or cuttings during the third year, and the five acres broken or ploughed during the second year, and cultivated to crop during the third year as above provided, shall be planted in trees, tree-seeds or cuttings during the fourth year: Provided that in cases where the land entered consists of a legal sub-division less than one hundred and sixty acres, then the respective areas requiring to be broken or ploughed, cultivated to crop and planted, under this sub-section and the the two sub-sections next preceding, shall be proportionately less in extent: Provided also, that the Minister of the Interior, in his discretion, and on his being satisfied that any trees, tree-seeds, or cuttings, may have been destroyed from any cause not within the control of the person holding the tree-claim, may grant an extension of time for carrying out the provisions of the three sub sections next preceding: Provided also, that at the expiration of the said term of eight years, or at any time within five years thereafter, the person obtaining such tree-claim, on proving to the satisfaction of the Minister of the Interior that he or she has planted not less than two thousand seven hundred trees on each acre of the portion broken or ploughed and cultivated to crop as hereinbefore provided, and that at the time of applying for a patent for the tree-claim, there are then growing thereon at least six hundred and seventy-five living and thrifty trees to each acre, the claimant shall receive a patent for the legal sub-division entered. If at any time the claimant fails to do the breaking up or planting or either, as required by this Act, or any part thereof, or fails to cultivate, protect and keep in good condition, such timber, then and upon such event, the land entered shall be liable to forfeiture in the discretion of the Minister of the Interior, and may be dealt with in the same manner as homesteads which may have been cancelled for non-compliance with the law as set forth in sub-section sixteen of section thirty-three of this Act. Provided that no person who may have obtained pre-emption entry of a quarter-section of land in addition to his homestead entry under the provisions of sub-section one, of section thirty-four of this Act, shall have the right to enter a third quarter-section as a tree-planting claim; but such person, if resident upon his homestead, may have the option of changing the pre-emption entry of the quarter-section, or of a less quantity of such quarter-section, for one under the foregoing provisions, and on fulfilling the preliminary conditions as to affidavit and fee, may receive a certificate for such quarter-section, or for such quantity thereof as may have been embraced in the application; and thereupon the land included in such change of entry shall become subject in all respects to the provisions of this Act relating to tree planting. Any person who may have been entered for a tree planting claim under the foregoing provisions, and whose right may not have been forfeited for non-compliance with the conditions thereof, shall have the same rights of possession, and to eject trespassers from the land entered by him, as are given to persons on homesteads under sub-section seventeen of section thirty-four of this Act, and the title to land entered for a tree planting claim shall remain in the Government until the issue of a patent therefor, and such land shall not be liable to be taken in execution before the issue of the patent.

DOES ADVERTISING IN A CLASS PAPER PAY?

The question, "does advertising in a class paper pay?" is frequently asked by merchants, and sometimes it is difficult to convince them that, as a rule, it does. Our able contemporary, the North Western *Lumberman*, answers the question so clearly that we transcribe his remarks *in extenso* He says it is a mistaken notion on the part of some, otherwise well informed and enterprising merchants, that advertising does not pay in class journals. Grocers, dry goods merchants, hardware dealers, jewelers, dealers in hats and caps or boots and shoes, in wall paper or books and stationery, and in various other branches of commerce and manufacture are apt to say on being approached by a representative of a class journal. "Oh, that may do very well for men dealing in the goods, recognized as having a connection with that branch of business, but it would not pay me." The fallacy of this line of argument is daily exposed in the experience of the editor of the *Lumberman*, to whom it is a matter of almost daily experience to have the question asked of him, "Where can I buy a certain line of goods to the best advantage?" A jeweler might think a lumber journal a strange vehicle for communicating a knowledge of his business to a profitable line of customers, but would have changed his views on hearing the enquiry which was made of us a few days ago by a lumberman, "Where can I get a good gold watch? I've had a rather satisfactory season's business, and I and several of my friends equally prosperous, have to see who you would recommend us to purchase from." There is no class of men who, when prosperous, will more readily and freely patronize a jeweler, than the members of the fraternity of lumbermen.

Carpets are not lumber, and it might appear fruitless to expect benefits to a carpet business from advertising in a lumber journal, but one of the leading carpet houses in this city, trying the experiment two years ago, will yet be found among our regular advertisers, and the house of Judson & Co. is now well known to the lumbermen of the West as among the firms whom they delight to patronize.

Tobacco is a staple in lumber camps and stores supplying goods to loggers and mill hands, and the Durham, which has been constantly kept before the minds of the lumbermen through persistent advertising in these columns, is the favourite brand among the 50,000 shanty men of the Northwest.

We might mention a dozen similar experiences, all tending to prove that no class of merchants can afford to overlook the benefits to be derived from advertising in a lumber journal. There are 70 000 men engaged in various departments of the lumber business between Buffalo and the Mississippi river. This is a vast army, each individual man of which must needs wear clothes, boots or shoes and head covering; they must consume the food which every well conducted grocery is prepared to supply, and no inconsiderable number of the patrons of this journal would gladly open acquaintance with wholesale grocers now unknown to them, who will supply their own extensive retail establishments with the many thousand dollars' worth of stock which enters into the trade with their employes and the general public. No store-keeping lumberman confines his stock to any one branch of trade. His purchases include groceries, dry goods, clothing, crockery, hardware, agricultural implements, boots and shoes, hats and caps, paints and oils, confectionery and tobacco. Whatever his employes or their families require, his shelves are expected to supply. No better class of customers, no better paying patrons, no more reliable and trustworthy men can be found in trade than are the lumbermen, and none whom it will better pay to seek custom from. This journal is a weekly visitor to many thousands of this class, men whose custom might well be sought by dealers in all the commodities which enter into the daily consumption and comfort of man, whether in the line of eating, drinking, wearing or ornament. A recent editorial notice in this journal of an extensive iron manufacturing establishment in West Virginia elicited no less than 70 responses within three weeks, from lumbermen who were desirous of obtaining iron goods. In the woods, sleighs and wagons are used, and no better vehicle through which the builders of these can make known the peculiar advantages of their individual manufacture is open to their choice than is presented in this journal.

There is no class of men more liberal in personal adornment or in the furnishing of their dwellings than the manufacturers and dealers in lumber. When blessed with a prosperous season like the past, it is not in vain that their families suggest the pleasure it would give them to refurnish the old home, to create or replenish a library, to refurnish the parlours and sleeping apartments, to add a heating or improved kitchen range to the department of comfort or convenience, or to array themselves in the beautiful fabrics of the haberdasher or the milliner.

It would be impossible to enumerate the various class of dealers who desire and would be profited by such trade as this journal is well calculated to assist them in obtaining. We would then ask the serious attention of all who deal in goods of any kind, to the proposition that an advertisement in the *Lumberman* is worthy of their test. It is an acknowledged authority among all who have to do with logs, lumber and timber. It circulates in the city and in the country; among the loggers in the woods and the men in the saw-mills. It is found upon the desk of a majority of the lumber dealers of the North, the West and the South, while no considerable section of the country can be found where its presence is not welcomed each week. An advertisement in its columns will, one week with another, attract the attention of at least 30,000, vast numbers of whom, while they may not at the moment be in need of the goods advertised, will not fail to have an impression fastened upon the mind, which in due time will bear legitimate fruit to the advantage of the advertiser.

—The latest discovery of gold has been made right in Halifax city, in the vicinity of Cornwallis street.

To Correspondents.

STADACONA.—Our Quebec correspondent, says the lull in the trade continues. Prices are without change. No further sales will likely be made until after receipt of English statements and circulars at the end of the year. The new regulations of the local government respecting the cutting of timber are very obnoxious to the trade. The feeling represented by the Ottawa lumbermen in their calling a meeting on the 16th inst., is pretty strongly impressed also by the representations of the trade in Quebec city. Messrs. J. Bell Forsyth & Co's annual timber circular, which is regarded as an authority is eagerly looked for. It is expected to make its appearance a few days before Christmas.

CHATHAM, ONT.—The cost of production of steam is estimated at about five pounds of coal per hour, for each horse power. Some improved cut-off engines have been run on two and a half to three per hour. Mr. Doty, of Toronto, has manufactured an improved gas engine, which runs two horse power, without, boiler, engineer or fuel, with 400 feet of gas, or about 40 cents per day.

ELFRIDA.—Mr. R. Quance, has an engine built by Messrs. Killey & Co., Hamilton, which runs a 3 run grist mill, with saw dust as fuel. Mr. Quance expects to have saw dust enough left after cutting up the logs in the neighbourhood to run his grist mill for eight years longer.

ELECTRIC LIGHT.—The cost is about $1—equal 1,000 feet of gas. No patent in Canada. Best consult the Brush Electric Light Company, Cleveland, Ohio.

Foolhardiness.

One of the conductors says that this fall stands forth in unprecedented prominence in the history of the Canada Central for the number of men who have returned from the shanties in a wind broken, wrecked condition of health. Scarcely a train comes which does not bring one or more of these ruined fellows. The source of the destruction lies entirely within the men themselves. After the day's work they gather in the shanty and discuss the day's doings. Some gang boasts loudly of manufacturing eighty logs per day, some seventy, some sixty, but the most fifty—a fair day's work. The fifty lots determine to equal the sixties, and seventies the eighties; and so, day after day, "the fight goes bravely on," until the weaker go to the wall, and are forced to leave. When really ill, shantymen are kindly tended, but when self-spavined the foremen have no mercy or medicine for them, and they are obliged to reach Mattawa or Pembroke as best they can on foot. It is a known fact that some have arrived in Pembroke poverty-struck both as to pocket and as to health, and have been compelled to walk on the railway to Ottawa, begging as they marched.—*Central Canadian.*

Lumbermen's Supplies.

To supply the different mills at the Chaudiere on the Ottawa, which get out an average of 150,000 logs each season, the following supplies are estimated as required during the winter:—825 bbls. pork, 980 bbls. flour, 525 bush. beans, 37,000 bush. oats, 300 tons hay, 3,650 gals. syrup, 7,500 lbs. tea, 1,875 lbs. soap, 1,000 lbs. grindstones, 6,000 lbs. tobacco, 75 boxes axes, 1 doz. each, 60 cross-cut saws, 225 sleighs, 3,750 lbs. rope, 1,500 boom chains, 7 feet each, 45 boats, 900 pairs blankets, 15 cookeries. 375 cant dogs, costing, at a moderate estimate, about $54,367.00.

This service requires in the woods, 450 men getting out the logs, 300 men piling and forwarding, and 300 men teaming, using 300 teams. The average number of men employed by each establishment throughout the year is 637, receiving for pay $306,000. From this it will be seen that the lumber merchants of the Chaudiere alone employ about 4,000 men, paying annually $1,836,000, which is all spent in and around the neighbourhood to the benefit of the trade of the country generally.

Lumbermen's Shanty.

A writer referring to the lumber trade on the Ottawa describes the winter dwelling of hardy lumbermen as follows:—"Having selected a desirable, convenient spot, with a good supply of water, a shanty is constructed of the simplest description, being generally built of rough logs with a raised hearth in the centre for a a fireplace, and an opening in the roof for a chimney. A double row of berths all round serves for sleeping accommodation, while from a wooden crane over the perpetual fire swings the huge kettle which, with the accompanying pot, serves all the purposes of cookery. The domestic economy is conducted upon strict temperance principles; tea is the constant beverage of the lumbermen, and they consume it in quantities, and of a strength which would effectually destroy their nerves if they possessed those delicate organs. In point of fact the beverage of the woodman ought to be called *tea soup* it being an infusion entirely different from that of our city drawing rooms. They place a couple of handfuls of tea in a kettle of cold water and hang it over the fire till it boils and attains a strength and fulness of flavour only palatable to throats which admire body in the fluids they imbibe. Many of these hardy men drink a pound of tea per week, and some of them double that quantity of the Chinese shrub, and without feeling any ill effects either from that or the salt pork which is the other staple article of diet. Perhaps the strong tea counteracts the fat pork, and *vice versa*. The stores of the lumbermen are usually carried up to their forest shanty late in the autumn, and all preparations are made to commence the work of felling the giants of the forest."

Timber Regulations in Quebec.

The morning *Chronicle* says:—The *Official Gazette* publishes the new regulations and amended schedule of dues to be paid by lumbermen working on the Crown Lands of the Province of Quebec. One decided improvement in these amended regulations consists in the reduction of the fee charged by the Government on each transfer of timber limits from four dollars per mile to one dollar per mile. The increased stumpage charged on pine saw logs, from 15 cents the former rate to 26 cents under the new regulations, is complained of by the lumbermen as an excessive advance, amounting to an additional tax of about 75 per cent over and above the rate formerly charged. There certainly does seem to be some reason for dissatisfaction on this head.

Hamilton Exports.

For the month of November, the exports of lumber from Hamilton to the United States, as verified by the U. S. Consul, are valued at $4,516. For the same month, scrap iron export is given at $1 806. It is worthy of remark that scrap iron brings $8 per ton more in Hamilton than in Buffalo; yet the price of bar iron and nails is higher in Buffalo than in Hamilton. The trade in car axles and in wrought iron generally is increasing largely in Canada, and there is no reason why the increase should not continue. Export of barley for November, $10,955; malt, $7 319; eggs, $4,516; wool, $22,556.

Fort Eddy.

The Pembroke *Observer* says:—On Tuesday of last week E. B. Eddy's store at Fort Eddy, on the Upper Ottawa, above Mattawa, was burned to the ground. Hardly any of the contents of the store, we believe, were saved. They consisted of the usual stock of supplies and general merchandise. The origin of the fire is not known.

ROBERT STEWART,

Wholesale and Retail Dealer in Lumber, Lath, Doors, Sash, Mouldings, &c., &c., GUELPH, ONT.

5 3m.

FOR SALE, AT A GREAT BARgain, 320 acres of excellent farming land, heavily timbered, and well watered by a branch of the Pigeon River, in Cheboygan Co. Michigan. Apply to the Editor of the CANADA LUMBERMAN. 1-tf.

Hardwood Timber Land for Sale.

FOR SALE, 1200 ACRES HARDWOOD timber land near Nipissing Railway, Coboconk. Easy terms: OSHAWA CABINET CO., Oshawa.

Timber Limits for Sale.

SEVERAL MOST VALUABLE TIMBER limits on North Shore of Lake Huron. For particulars apply to

THOS. SHORTISS,
Imperial Bank Building, Toronto.

TIMBER WANTED

GREY OAK, BLACK ASH AND PINE. Standing timber wanted; also Oak Railroad Ties. Address, with full particulars,

S. S. MUTTON & CO.,
TORONTO.

P. S.—A 35 H. P. Engine and Boiler for sale, low.

LAUDER & THORNTON MFG. CO.,
MANUFACTURERS OF
Steam Gauges, Vacuum Gauges
ENGINEERS' & PLUMBERS' BRASS GOODS, &c.
98 Adelaide Street East, Toronto.
Steam Gauges correctly tested and repaired.
2-5in

FILES RE-CUT!

THOMAS GRAHAM,

File Works, 35 Sherbourne Street, Toronto, Ont.

Old Files reground and re-cut equal to new for use. During the past year I have re-cut nearly 3,000 dozen of old files for mill owners and others in Ontario and Quebec. Prices—per dozen for Mill Files, 8 in. $1.50; 10 in. $2; 12 in. $2 75; 14 in. 3.75. Other kinds *pro rata*. Quotations from these rates to large consumers.

G. T. PENDRITH,

GENERAL

MACHINIST.

39 Adelaide Street West,

TORONTO.

PIANO SCREWS A SPECIALTY.

Central Prison Industries.

The undersigned will receive tenders up to noon of

Friday. 17th December inst.,

For the delivery in the yard of the Central Prison at Toronto, the following quantities of lumber, viz.:

150,000 to 200,000 feet of basswood lumber in boards 12 feet long and 1¾ inches thick, to be free from knots, shakes, and imperfections.

150,000 to 200.000 feet of maple, beech, white birch, and white ash lumber, of the same dimensions and description.

15,000, feet 1-inch clear pine, 15,000 1-inch 2nds pine.

15,000 feet 1-inch white wood, 3,000 3x3 inch maple.

1,000 feet 2-inch white oak, 1,000 2-inch maple.

5 000 feet 1¾ inch maple 8 inches wide, 29,000 1-inch boards.

The 1¾-inch bass wood and hardwood lumber to be delivered at the rate of 50,000 feet per month, commencing 1st January next. The other lumber to be delivered on or before 1st February next. The whole is to be examined and culled at Central Prison at the time of delivery

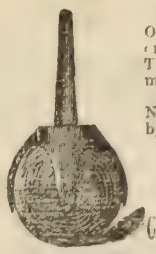
Offers may be made for the whole or a portion of the lumber, and the lowest or any tender not necessarily accepted.

Sureties will be required for the due fulfilment of the contract.

J. W. LANGMUIR,
Inspector of Prisons, etc.

Parliament Buildings,
Toronto, 4th Dec. 1880.

GLASS BALL CASTORS



For FURNITURE, PIANOS, ORGANS, etc., the best and most ornamental Castors in the market. They greatly improve the tone of musical instruments

RHEUMATISM, NERVOUSNESS, SLEEPLESSNESS cured by manufacturing belts with them Sold by hardware dealers. Agents wanted.

ADDRESS FOR CIRCULARS;

Glass Ball Caster Company,
64, 66 & 68 REBECCA ST.,
HAMILTON, ONT.

1-8m

TO LUMBER MERCHANTS

WM. MONTEITH,

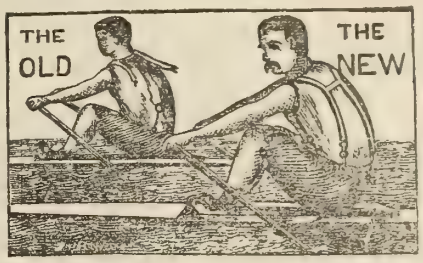
Produce & Commission Merchant

25 Church-street, Toronto,

Can supply Lumbermen and other buyers with

MESS PORK,
C. C. & L. C. BACON,
WHITE BEANS,
DRIED APPLES,
CHEESE,
&c., &c., &c.

at lowest market prices.



The UNIVERSAL SUSPENDER.

SOME REASONS why they are the best:—

1st.—No Elastic requied.
2nd.—Is slack when stooping.
3rd.—It never slips off the shoulders.
4th.—Sold at prices of common suspenders.

Manufactured by C. E. RAMAGE & CO.

90 BAY STREET, TORONTO.

THE
Intercolonial Coal Mining Co.,

offer their fresh mineral bituminous Coal from their

DRUMMOND COLLIERY.

F.O.B cars, deliverable at stations of the Intercolonial and Grand Trunk Railway.

Apply to

Intercolonial Coal Mining Co.,
26 St. Francois Xavier Street,
MONTREAL

The coal is now being received at Toronto by several of the dealers—W. J. Keith, C. J. Smith and others.

JOHN McGREGOR & SONS,

MANUFACTURERS OF ALL KINDS OF

STATIONARY,
MARINE, and
LOCOMOTIVE BOILERS,
and SHEET IRON WORK

Portable Boilers for Threshing Machines, Shingle Mills, &c., furnished on short notice. All Boilers tested by cold water pressure to 150 lbs. to the square inch before leaving the shop.

SECOND-HAND MACHINERY
bought, sold, or taken in exchange for new work.

REPAIRS PROMPTLY ATTENDED TO

183 Atwater St., Detroit, Michigan.
BRANCH SHOP—
Cor. Glengarry Ave. & Stuart st.,
WINDSOR, ONTARIO.

M. BRENNEN,

MANUFACTURER AND WHOLESALE DEALER IN

Lumber, Lath and Shingles,

63, 65 and 67 King William-st.,

HAMILTON, ONT.

Mills and Timber Limits at Silver Creek, Tiago P. O., Ont.

Bill Stuff cut from 10 to 60 feet. Cedar Posts on hand.

Orders sent to M. Brennen, Tiago P. O., will receive prompt attention.

QUEEN CITY OIL WORKS!

ALL KINDS OF

MACHINE

AND

BURNING OIL!

Send for Samples.

Saml. Rogers & Co.,

33 ADELAIDE ST. EAST,

TORONTO.

THE GENUINE

Silver-Steel, Lance-Tooth Cross-Cut Saw!

It stands without a rival, and is the fastest cutting saw in the world. It has beaten the best Canadian and American-made saws 33⅓ per cent. in every contest. Its superiority consists of its excellent temper. It is tempered under the Secret Chemical Process, which toughens and relieves the steel. It gives a finer and keener cutting edge, and will hold it twice as long as any other process. We have the sole right for this process for the Dominion of Canada.

None genuine that are not hereto before cut with registered trade mark with the word "The Lance," and Maple Leaf with our name. Price $1 per foot.

CAUTION. — Beware of Counterfeits. There are inferior counterfeits on the market, which are intended to be sold at a high price upon the reputation of this saw. We will send to any address a saw exactly like any counterfeit, warranted equal in quality or no sale, at 60c. per foot. Therefore do not be humbugged into paying a high price for a second class saw. A fact to bear in mind is that if the material and temper are not of the very best quality the teeth of the teeth amounts to nothing. A saw, like a knife, will not cut fast without it will hold a keen, cutting edge. We have cut off a 14-inch sound basswood log in eight seconds with this saw.

Manufactured only by

SHURLY & DIETRICH,

Manufacturers of Saws, Pastering Trowels, Straw Knives, &c., &c.

GALT, ONTARIO.

December 10, 1880.

A Night in the Sun Office.

THE SYSTEM THAT STRUCK AN OUTSIDE NEWSPAPER MAN AS VERY INTERESTING.

(From the Louisville Post.)

The *Sun* newspaper is a small affair in square inches, but every inch is an institution. The sheet is not as large as the Louisville *Post*, but a comparison of the paper on any day with either of its great New York contemporaries will prove that it contains every item of valuable current news, local, national, or foreign, and hardly a line of trash. Notwithstanding the condensation necessary to secure such results, the paper is written with singular clearness, and is deservedly noted for literary grace. And further, along with all the news, it finds room for pointed editorials—pebbles of hard English well flung—and as much of miscellaneous and interesting matter as any reasonable reader would care to have. In short, the *Sun* is the most complete newspaper in America, supplying everything in such a shape that everything can be read.

With such characteristics it is no wonder that it is the most widely read paper in New York, where nearly everybody is busy; and so long as it is conducted with the present liberality, energy, and care, its continued growth is assured; 127,000 copies are now sold daily, which is one paper to every ten people in New York city, a proportion that is likely to hold in the future, if, indeed, it is not improved with the increase of the proportion of busy people.

A majority of the newspaper men who are familiar with the *Sun* as an exchange, and who know of its great prosperity, have long ago resolved that, if they ever start a paper of their own, the *Sun* shall be their model. Many such attempts have been made and have failed. The Cincinnati *Sun*, a mechanical imitation, a perfect counterfeit, when too far off to read, was the most notable instance. The trouble with all such attempts was that the projectors did not know the New York *Sun* and its system. They imagined that by imitating its size and outward appearance they would save white paper and type setting and still make a bright and successful journal, when in fact the size of the *Sun* is fixed, not to save white paper and type setting, though it does this incidentally, but because it is the smallest size into which all the news can be put and still preserve a clear and pleasant shape. The *Sun* is really run on very expensive principles. The cost of its news, coming through men who are able to condense, is as great as that of any of the monster papers which employ diffuse, ill-paid fellows, and meet their heaviest expense in telegraph bills, paper bills, and the wages of their able-bodied compositors. The *Sun* pays as much for editors to cut out words and leave tangible facts and ideas as the blunderbuss papers pay for writers to coin sentences.

It is only after some study that one can realize what an enormous amount of news a great metropolitan paper must handle before it can be said to "have it all," and it is a matter of real wonder that a little paper like the *Sun* contrives to hold so much. It is a case of the learned man's small head; it is the result of a complete system carried out daily under able management, by the hard work of many bright minds. Just think of the materials that come to the office every day. Though the hundreds of men who gather the news know that their positions depend on their being as brief as is consistent with completeness, they still furnish, at a small estimate, more than ten times as much copy as can possibly be printed. The issue daily of reading matter averages about twenty-two columns; it contains all of value in two hundred columns of copy sent in, from which it has to be extracted and set up within the short space of eleven hours, the greater portion within half that time. I spent yesterday and last night in the *Sun* office to observe the process.

Outside of the editoral work of condensation, the capacity of the paper is enhanced by several mechanical devices. For instance: The type, while clear, is compact and small, being mostly nonpareil and agate; then the headlines, while nicely guaged to suggest the importance of the matter to follow, will be found on measurement, in any case, to occupy very small room. There are other ways in which the types are compressed, but I will proceed now to give an outline sketch of what I saw of the work of the editors and reporters.

Mr. Dana maintains the closest personal supervision of the whose establishment. In the editorial department, which comes perfected from his hands, he is assisted by seven writers. When he goes home, Mr. John Swinton is left in charge.

The city editor has immediate command of forty-two reporters, and his territory embraces New York and the surrounding cities, and a half day's journey into the country in any direction. All the reporters and many of the other writers come to the editoral rooms (a small suite for Mr. Dana and a large hall for all the rest) at 11 o'clock in the morning. Mr. Dana learns the plans of the others for the day, and makes his suggestions or gives his orders, writes a leader and a paragraph or two and assigns specified subjects to be discussed by members of his staff. Before he leaves he reads a revised proof of all the chief editorials.

Distant correspondents are at liberty to send at first only a short message by telegraph, stating the character of the news they have and asking instructions, which are promptly returned to them by telegraph, unless the news comes late at night and is of great importance, when the matter if left to their discretion. The selection and control of correspondents is a vital matter in the *Sun* system.

The city editor and his four assistants keep a very complete assignment book, in which are entered memoranda of every point that ought to be worked on each day, entries being frequently made three months in advance. Besides this book, reporters are kept on duty constantly at the police headquarters in New York, Brooklyn, Jersey City, and neighbouring towns, and immediately on the receipt of a piece of news from any police station it is telephoned to the city editor. Using the book of assignments, the papers of the day, and any hints he may have had from other sources, the city editor directs each reporter as to what he must do, exercising his best care in selecting the men with reference to their peculiar talents for the particular style or kind of work he desires.

About 5 o'clock Mr. Dana steps from his rooms to go home, first stopping to consult with Mr. Swinton and to leave with him a schedule of the editorial matter he wishes to have appear. A calculation is now made to determine how much space Mr. Dana has left, and then the managing and city editors make up their schedules. On a comparison of these it is generally found that each has been too liberal with himself, and both schedules have to be cut to leave a sufficient margin for the certain and probable news, local and telegraphic, that is to come. When the schedule matter is finally made up, it is given to the compositors, who are now all at work. Once on the printers' hooks the schedules, in their outline of space, not in their contents, are absolute. They represent what the paper will hold, and on the receipt of any unexpected matter, either the articles embraced in the schedules or the later news, or both, must suffer condensation or slaughter. It happens occasionally that, piece by piece, the whole of the schedule lists is set aside to make room for more important news, and sometimes a hundred columns of copy very late is reduced to two columns before it reaches the printers. A few weeks ago fifty columns of Washington matter was boiled down to one, and not an important fact was lost.

Before the conference as to the schedules, the city editor has received returns from most of the morning assignments, and has started many of the reporters on new errands. At 6 o'clock the night city editor arrives, who, assisted by the three other city editors, from this time forward directs the reporters and edits their copy, the managing editor keeping him informed as to the necessary condensation.

It matters not how great the rush of matter and the consequent condensation may have been, nor how much of type may have been set aside. The *Sun* forms are locked up at the stroke of a certain hour every morning, and at 3 o'clock the paper may be brought anywhere in New York city. This is one hour ahead of any other New York morning daily, and a second editon is rarely needed to maintain the *Sun's* reputation for printing all the news.

It will be seen, I think, that while the *Sun* is extremely economical of space, and therefore of the time of its busy readers, and though it pays as seldom as possible for redundant words, it is exceedingly liberal in getting the absolute news. Ambitious newspaper men with small capital should not undertake to run a paper on the *Sun's* system, but such a paper is needed in all of our large, busy cities, and the day is not far distant, probably, when the *Sun* will no longer stand unique and alone.

A PLACE for everything—Baby's mouth.

Celebrated Book Stealers.

THE PRIEST WHO COMMITTED MANY MURDERS BECAUSE OF HIS PASSION FOR BOOKS.

(From the London Spectator.)

Many eminent characters have been biblioklepts. When Innocent X. was still Monsignor Pamphilio he stole a book—so says Tallemand des Roux—from Du Monstier, the painter. The amusing thing is that Du Monstier himself was a book thief. He used to tell how he prigged a book, of which he had long been in search, from a stall on the Pont Neuf; "but," says Tallemand (whom Janin does not seem to have consulted), "there are many people who don't think it stealing to steal a book, unless you sell it afterward."

But Du Monstier inclined to a less liberal view where his own books were concerned. The Cardinal Barberini came to Paris as Legate, and brought in his suite Monsignor Pamphilio, who afterward became Innocent X. The Cardinal paid a visit to Du Monstier in his studio, where Monsignor Pamphilio spied, on a table, "L'Historie au Concile de Trento"—the good edition, the London one. "What a pity," thought the young ecclesiastic, "that such a man should be, by some accident, the possessor of so valuable a book." With these sentiments Monsignor Pamphilio slipped the work under his soutine. But little Du Monstier observed him, and said furiously to the Cardinal that a holy man should not bring thieves and robbers in his company. With these words, and with others of a violent and libellous character, he recovered the History of the Council of Trent, and kicked out the future Pope. Amelot de la Houssaie traces to this incident the hatred borne by Innocent X. to France.

Another Pope while only a Cardinal, stole a book from Monage—so M. Janin reports—but we have not been able to discover Monage's own account of the larceny. The anecdotist is not so truthful that Cardinal need flush a deeper scarlet, like the roses in Bions "Lament for Adonis," on account of a scandal resting on the authority of Menage. Among royal persons, Catherine de Medici, according to Brantome, was a biblioklept. "The Marshal Strozzi had a very fine library, and after his death the Queen-Mother seized it, promising some day to pay the value to his son, who never got a farthing of the money." The Ptolemies, too, were thieves on a large scale. A department of the Alexandrian Library was called "The Books from the Ships," and was filled with rare volumes stolen from passengers in vessels that touched that port. True, the owners were given copies of their ancient MSS., but the exchange, as Aristotle says, was an "involuntary" one, and not distinct from robbery.

The great pattern of biblioklepts, a man who carried his passion to the most regrettable excesses, was a Spanish priest, Don Vincente of the Convent of Pobla in Arragon. When the Spanish revolution despoiled the convent libraries, Don Vincente established himself at Barcelona, under the pillars of Los Encantes, where are the stalls of the merchants of bric-a-brac and the seats of them that sell books. In a gloomy den the Don stored up treasures that he hated to sell. Once he was present at an auction where he was outbid in the competition for a rare, perhaps a unique, volume. Three nights after that the people of Barcelona were awakened by cries of "Fire!" The house and shop of the man who had bought "Ordinacions per los Gloriosos Reys de Arago," were blazing. When the fire was extinguished the body of the owner of the house was found with a pipe in his blackened hand and some money beside him. Every one said: "He must have set the house on fire with a spark from his pipe." Time went on, and week by week the police found the bodies of slain men, now in the street, now in a ditch, now in the river. There were young men and old, all had been harmless and inoffensive citizens in their lives, and—all had been bibliophiles. A dagger in an invisible hand had reached their hearts; but the assassin had spared their purses, money, and rings. An organized search was made in the city, and the shop of Don Vincente was examined. There, in a recess, the police discovered the copy of "Ordinacions por los Gloriosos Reys de Arago," which ought by rights to have been burned with the house of its purchaser. Don Vincente was asked how he got the book. He replied in a quiet voice, demanded that his collection should be made over to the Barcelona Library, and then confessed people who had bought from him books which he really could not bear to part with. At his trial his counsel tried to prove that his confession was false, and that he might have got his books by honest means. It was objected that there was in the world only one book printed by Lambert Palmart in 1482, and that the prisoner must have stolen this, the only copy from the library where it was treasured. The defendant's counsel proved that there was another copy, in the Louvre; that, therefore, there might be more, and that the defendant's might have been honestly procured. Here Don Vincente, previously callous, uttered an hysterical cry. Said the Alcalde: "At last, Vincente, you begin to understand the enormity of your offence?" "Ah, Signor Alcalde, my error was clumsy, indeed. If you only knew how miserable I am!" "If human justice prove inflexible, there is another justice whose pity is inexhaustible. Repentance is never too late." "Ah, Signor Alcalde, my copy was not unique!" With the story of this impenitent thief, we may close the roll of biblioklepts.

Marrying a Tenor.

The following is an extract from a letter from the wife of a tenor to her friend!

Yes, Jenny, we have 30,000 dollars a year; the praises of my husband are sounded every day in the newspapers; he is applauded every night; he sings and is a very king in his art. But you don't know what it is to be the wife of a tenor. Those who flatter my husband, and they are numerous, are incessantly telling himself: "M. Michael, you have a mine of diamonds in your throat." That may be true; I don't say it is not, but if you could understand what consequences it entails—a mine of diamonds in a man's throat! Michael is always as cross as a bear because of the state of the temperature. A barometer is less variable. He is continually opening and shutting the windows; when they are open he wants them shut; when they are shut he says he stifles. You have no idea of the trouble we have at hotels to prevent his taking cold. Even the style of carpet becomes a study. And the cartloads of furs we carry about with us! And the difficulty we have with the fires! There is also a long chapter as to what he may and may not eat; this is too strong and that is too weak. And the night he sings there is a syrup which he must drink five times during an act and a wash of brandy and camphor with which to rub his throat. From morning till night a tenor thinks of nothing but himself; he listens to himself sing; he studies poses before a looking-glass; he calls after the servants, "Jean, muffle the doorbell, its noise affects my nerves. Brigette, don't pass before me again; you make a draught." He interrogates his throat every ten minutes, "la, la, lo." Never a sensible word, always "la, la, la; at table he does not talk for fear of deranging his "la, la, la." If I ask him to take me out on a fine day, he runs to the piano-forte and exercises his "la, la, la!"

It was only natural that the States should subside into quietness when their great struggle was over. They *have* accordingly subsided for the time being into speculations, betting over boat races and making themselves comfortable for the winter. The people over there are at present being busy and very prosperous, and when that is the case, they have neither time nor inclination for much else, but to look after the coppers and enjoy themselves.

THE Queen of Wurtemberg's life is regulated with conventual exactness. She is the Colonel of a Russian regiment, and frequently appears at review in her uniform. Her Majesty inherits her father the late Czar's mania for drill and pipeclay. The fat, beer-drinking, pipe-smoking King Cole to whom she is mated used to dispute with her about it, but at length gave in and allowed her to have her head. All he now asks is to be left undisturbed in dens in his palaces, in which he can enjoy a little untidiness.

THE Intercolonial Literary and Anthropological societies, which number among their members such men as Henri Martin, Capellini, Delgado, and Mr. John Evans, of the British Museum, opened their congresses at Lisbon last month; the King, Dom Luis, and the ex-King, Dom Fernando, with the Ministry and all the notables of Portugal, were present. The savants were the guests of the city and of the ex-King, and the King and Queen gave a ball in their honour.

The Montenegrin High Court.

PRINCE NIKITA HEARING THE COMPLAINTS OF HIS SUBJECTS IN PATRIARCHAL FASHION.

There are a few customs and spectacles still lingering in this age to remind us that the world was not always prosaic, utilitarian, and unbelieving—a few survivals of the time when the superstition of the loyalty of all classes found uncriticised expression in magnificent ceremonies. They are dying fast. The simplest, but also the most interesting, of such quaint shows is a seance of the Supe for Court of Appeal in Montenegro. To the left of the palace gate stands a lime tree of very moderate size, surrounded by a bank of turf neatly edged with boulders Hither, towards 8 in the morning, strolls the Prince, followed by his officers and guard. At a certain distance from it they halt and uncover, which his Highness steps briskly forward and seats himself at a square nook left hollow in the wall to accommodate his legs. If personages of distinction are present they receive an invitation to take place on either hand, and the court is open without more ceremony. Sometimes the whole space in front is crowded with peasantry in silent ranks, eager to behold their chief and hear his wisdom; but in this time of war, which makes such heavy demands on the labour of the few who stay at home, the audience is small. I have seldom beheld a finer subject for the painter. At a distance of twenty yards or so, on the right front of his highness, stand the veterans of his bodyguards ranged in line, tall fellows mostly, grim of aspect, wearing crosses and decorations, heavily armed. The long fringe of their plaids sweep the ground, or one end of it is thrown across the shoulders in Spanish fashion. On the other side, at a like distance, stand a group of peasantry, cap in hand, waiting to explain such complicated grievances as neither the village elders' court, nor the district tribunal can arrange to their satisfaction. To the left rear of the prince aides de-camp and attendants of the Waywodes present take up station; they wear their caps, being "out of court," by legal fiction, though nearer to the sovereign than the rest. Everyone being placed, in two minutes proceedings begin. The first complaint, which his highness explained to me on one occasion, was that of a weazened veteran, very ragged and dirty, but wearing two silver mounted pistols and a yatighan. In a sing-song voice, without hesitating for an instant, his petition was made. He had answered the lawful summons of his chief, and repaired in arms to the camp at Sutormans, whence Gen. Bozo Petrovich had dismissed him as too old and war-worn for service. "I am not old, Gospodar," he lamented, "for I am strong. And if I have bullets in my body is that a reason that I should be insulted? I pray you Gospodar, to write to Bozo Petrovich and order him to let me fight." The anxiety of the poor man was painful to watch as he turned his cap ceaselessly, awaiting reply, which was not given in my presence.

Of another suitor his highness told me that in some fight he lost his comrades, and was attacked, all alone, by five Turks. Four he killed and wounded the fifth, but he fell himself in the struggle. Snow lay on the ground, and the evening chill restored him to consciousness. When his eyes opened he saw the Turk painfully crawling to gather wood, and he proceeded to assist the infidel. When certain comrades arrived at dawn they found these two sharing their last ration across the fire, and the Montenegrin would not be removed until he had seen his late foe placed in a litter. Together they were carried to the hospital at Cettinje. A brawny little man of the body-guard was pointed out to me as the hero who brought in a dozen and a half of heads after one battle. The czar presented him with all the decorations possible—I saw them—and the Russian ladies subscribed a pretty souvenir in the form of a head-chopping knife, encrusted with precious stones, at the expense of $1,200. This I did not see, for the owner leaves it with his parents, an example to the youth of that vicinity. In regard to this head-cutting, Gen. Bozo Petrovitch told me that he would not try to stop it, in the hostilities daily expected when I was in his camp. He declared it a modern practice, taught within this century by the invading armies of the porte. Nose-slicing is still more recent, for until late years prisoners was never made. In the last period of the war, however, when whole battalions surrendered, the practice was dropped of necessity, and we may even hope that it will never be revived. The prince himself told me that he made 11,600 prisoners, whom he could not keep for want of means. The Turkish government had none to exchange, and for several good reasons; it would not ransom them; and he was obliged to send them back unconditionally. One officer was captured three times.

Music in Old English Churches.

In country churches the loft was, and even is, usually known as "the singing-gallery," the musical instruments being the clarionet, violin, violoncello, flute, &c. Mr. Noake, in his Rambles in Worcestershire, says that in Tenbury Church, in the year 1771, they were not only horns and clarionets, but also a drum, whose sound was heard in divine service for some forty years after that date. In some country churches the number of the psalm that was to be sung was chalked on a slate, and suspended from the front of the singing-gallery. It is said of the parish clerk of Isle Brewers, Somersetshire, that in giving out the hymn, and suddenly finding that the slate was not hung up, his announcement took the following shape: "Let us sing to the praise and glory — I say, why doan't 'ee hang out the slate?" During the singing the congregation in the nave turned their backs upon the clergyman, and looked toward the singing gallery, where the parish clerk and his fellow-performers were ensconced. In a Yorkshire village church early in this century the instruments in the singing-gallery were the violin, violoncello, clarionet, serpent, and bassoon, and when the old clergyman wished for the "Old Hundred" to be sung, he called out to his clerk, "Straack up a bit. Jock! straack up a bit!" Of this same Yorkshire pair it is related that on the occasion of the first missionary meeting, when the congregation were waiting in the church-yard, the old Vicar said to his clerk, "Jock, ye maunt let 'em into th' church; the dippitation a'nt't coom!" but, on the arrival of the two clergymen who formed the deputation, the clerk called out to the people, "Ye maunt gang hoame, t' deppitation's coom?" The old Vicar introduced the two clergymen in addresses that were models of brevity: "T' furst deppitation will speak!' "T' second deppitation will speak!" after which the clerk lighted some candles in the singing gallery, and gave out for an appropriate hymn, "Vital spark of heavenly flame!' The parish clerks who give out the hymns and lead the congregational singing are probably at the present day only to be found in a few remote places, and in parishes where there is a second church, at some miles' distance from the mother church, with its one Sunday service. Here, very likely, the man is still to be found who unites in his own person both clerk and choir. A friend of mine had such a clerk, and the hymns were those of Tate and Brady. First of all the clerk sounded the note on a pitch-pipe, and after this musicial prelude he wound up his nose, as it were, and, with a strong nasal snarl, pitched the key-note and began the psalm. A great favourite with him was what he called "The Happy Man," the psalm beginning with the line, "Happy the man whose tender care"—which word he pronounced "car"—and the last line of the verse, "The Loard shall give him rest," was repeated twice and shouted with great fervor. The rustic audience were charmed with his execution of this psalm, and are greatly pleased when a Boanerges out of their own ranks can thus display the power of his lungs.

"By Jove!" exclaimed Harry; "look at that girl! What colour! She's the picture of health." Said Dick, who has learned to discriminate between nature and art: "A picture of health! A painting, you mean."

YOUNG lady—"Very changeable weather, Mrs. Wiggins, isn't it?" Mrs. Wiggins—"'Ees, miss, it be. Fust 'ot, yer see; then co'd, then 'ot ag'in; but it's a blessin', 'cos if the weather was n't a little wariable there would n't be no wariety in some folk's conversation."

A DANBURY man has a Boston lady visiting him. Sunday evening, on coming out of church with her, he extended his arm, and, with a delicate deference to her prejudices, said! "Will you accept my upper limb?" With a gratefui look from her glassy eyes she accepted.

A YOUNG lady artist married a young gentleman artist. The uncle of the bride made a call upon them and found them sitting in opposite corners of their joint studio, in the sulks, the husband saying that his wife's waist was out of proportion, and the

Curious Idol Worship in China.

THE PECULIAR CEREMONIAL BY WHICH EVIL SPIRITS ARE CAST OUT.

HANGCHOW, CHINA.—A curious display of idol worship is being nightly enacted not far from this city. It is not easy to determine to what sect it belongs, for, though held in a Taoist temple, no priest of either that or any other takes part in the ceremony. It is entirely carried out by the people themselves, and being in the seventh moon, when the names of the departed receive so much attention from their living relations, it may be correct to consider it a part of ancestral worship. At the beginning of the moon proclamations were posted all over the city announcing the commencement of this strange ceremony, and calling on the people to come up and pay their taxes or duties to Yuh-whang Shung-ti, "lord of the world and savior of men," as they do to their earthly Emperor. Each night, from the 1st to the 15th of the seventh moon, this panody on loyalty is carried out, and delegates from various districts bring strings of paper sycee, which is weighed with the greatest care as if it were real silver, entered into the account books of an official, and at the proper time in the ceremony is sent up to the spirits, through fire. An idea of the quantity of paper money consumed may be formed from the price received for the ashes, which realizes a total for this half month at 16 cash an oz. or not less than $30.

The real business of the evening commences after dusk: The procession, which goes out of the village in order to return escorting the spirit of the Emperor, begins to form. Each man carries a lantern, with the name of his district or society painted on it. The main temple and all the lesser ones are brilliantly lighted up with rows of lantern of red cloth, and some place large reflectors behind candles, the effect of which is very pleasing. Theatrical dresses of the most gorgeous colours, and heavy with gold lace, pass along in groups; boys dressed in red cloth and gold tinsel hats, men bearing swords, and battle axes, and bands of musicians go to make up this unique procession. The centre of all is the Emperor's chair, carried by twelve bearers, containing his tablet; a man on each side, carrying large white feather fans, shield it from the public gaze, but waving to and fro as if fanning a living person.

After a long interval, the big chair gave forth a booming sound, and the great idol Yuh-whang Shung-ti, wearing a most gorgeous dress, appeared and was placed on a raised platform under a rich canopy. All immediately fell prostrate on the ground, and, for a while, silence reigned supreme; presently the master of ceremonies took his place, and the bearers of cards of those gods who, by their rank, are allowed to pay their respects to his Majesty (as officials are with the real Emperor) began to arrive. A few feet from the throne they knelt and respectfully presented their card, which was received by an official, who announced, in a loud voice, the name and rank of the sender, the court musicians playing on their instruments on the arrival of each fresh card, of which, that night, there were forty-eight.

A few devout worshippers were allowed to prostrate themselves in the royal presence, and toward midnight his Majesty proceeded to judge the evil spirits.

The Chinese consider all mad persons possessed by a demon, and their friends, in the hope that this will be cast out by the ordeal through which they have to pass at this court, gladly send them there, each patient paying $55. These unfortunates are locked up in the hall before mentioned as the arrive—sufficient in itself to almost upset the balance of a sound mind. An official approaches and reverently asks for the keys. The request is granted, and runners ordered to bring one of the evil spirits to be judged. They rush off with a yell to obey this order, and presently they are to be seen at the far end hurrying along one of these unfortunate people. In the midst of frightful yells, the flames of the immense pile of paper money making the whole court as light as day, this poor wretch is brought into his Majesty's presence. He was a tall, powerful man, his face pale through passive; but if his acts gave any clue to the state of his mind he was the only sensible person there, for he refused to kneel! The excitement became intense. The runners threw themselves upon him with fierce energy to force him to kneel, but he was strong enough to resist them all, and after a fruitless struggle he was hustled out of this brilliant scene, and again thrust into the dark infernal regions. Another was brought forth with the same demoniacal yells. He quietly knelt, and was at length pronounced guilty, and sentenced to be beaten on the ankles with the light bamboo. A straw figure was brought forth to represent him, and he was obliged to look on while it received the punishment.

Spanish Murders and Brigandage.

(Saturday Review.)

In Spain there is not much actual murder, but there is a rampant brigandage, which only stops short of murder provided it can rob without it. Even in Madrid itself, in one of the finest and most frequented streets, a member of the Senate was, only two years ago, kept a prisoner in his own bedroom and threatened with death until he paid the ransom demanded of him. Bands of robbers, as is only too well known, haunt the mountain districts even in the neighbourhood of the capital. The brigands are said to have friends in very high places. They exercise a terror which prevents quiet people from daring to give evidence against them; they walk out of prison if they are put into it; and when they hold land they pay to the Government just the amount of taxes that they think convenient. Justice again is slow in most countries, but in Spain it scarcely moves at all. Every process is secret, and everything is carried on in writing. The pile of papers heaped up in reference to the murder of Gen. Prim ten years ago mounts up and up; but it is not even yet thought high enough, and a trial seems as far off as ever. The Goverment is as unable as any one else to insure a speedy conviction, and if it really wants to get rid of notorious criminals, it shoots them on the pretext that they are trying to escape. In minor matters there is the same inevitable delay, and in 1879 the official Gazette announced that a witness was wanted in reference to a railway accident that had occurred in 1864. Every Administration, too, invents new rules, and wants things to be done in its own style, and, whenever proceedings have been pushed forward a stage, compliance with some new regulation is exacted, and the matter is, and always remains, just where it was. As a last resource forgery is called in, on the chance that it may expedite the course of business when nothing else will. Next to robbery with violence, forgery appears to be the favorite failing of the nation. Even brigands forge, so that they may show themselves as good and civilized as their neighbors. Not long ago in one of the principal ports of the Mediterranean a cargo was got through the Custom-house duty free by means of a whole set of documents forged in the Custom-house itself. And so notorious and so general is the practice, that when it appeared that forgeries of coupons of the State debt had been made actually in the office where the debt is supposed to be controlled, the Minister of Finance mildly replied to questioners in the Chamber, that in a country where coin, bank-notes, and every kind of private document were habitually imitated, no one could wonder that the same ingenuity should be employed in forging state coupons.

NECESSITY is the mother of invention, and a newly-married Philadelphia man is experimenting with an electrical apparatus by which a party on an upper floor can light the fire in the kitchen without coming down stairs or getting out of bed.

A FRISKY old widow, by the name of Butler, who had been married several times, usually with disastrous results to her husbands, having obtained a divorce from her last husband, who was a Republican, immediately married a new husband, who was a rising young man and a Democrat. The friends of the widow congratulated her upon the acquisition of a new husband. The widow blushed violently, and, chewing the seam of her apron, replied: "Why, he is not a new husband at all. He is the same one I used to have before the war."

IT is absolutely necessary to look carefully after the education of your boys. They are apt to get wrong notions into their heads, and unless watched to make use of them to their detriment. A Sunday school teacher was examining her class on the parable of the wheat and tares. "And what is a tare?" she asked impressively. "I know," said a little fellow, who had watched his parent's course to some purpose, "it is a high old time; that's what it is." When asked by the astonished teacher to explain himself he said, "Last week father was gone three days, and I know just where he went and what he did, and the mother told me that the guv'nor was off on an old-fashioned tear."

MARKET REPORTS

CANADA LUMBERMAN OFFICE,
TORONTO, 13th Dec. 1880.

There is no change of consequence to note in regard to the local prices of lumber; the tendency however, is firmer. Navigation finally closed for the season on Monday, the 6th inst., by Messrs Christie, Kerr & Co., clearing the *Mary Grover*, with a mixed cargo of shingles, boards, and timber, for Charlottee, where the vessel arrived safely on Tuesday, and will remain moored during the winter. The high winds during the early part of last week broke the ice on Toronto Bay, but it closed towards the end of the week. The sudden closing of navigation leaves on the Toronto dock and along the line of the Northern Railway, nearly two million feet of lumber and a large quantity of shingles, which would have been shipped before this time; however, much of them will be moved by rail westwards and south before spring. Several car loads of hard wood arrived from the States by rail last week. Reports from lumbermen's camps are that work is going on briskly with plenty of snow. Local prices of lumber in the western cities and towns of Canada also show signs of greater firmness, and the demand keeps good. Manufacturers of all classes have orders on hand which will keep them busy to complete until the spring opens. There is a tendency amongst dealers to work less on the credit system than formerly, which is a move in the right direction.

WHOLESALE RATES.

Mill culls,	$ 5 50	@	7 00
Shipping cull stocks	10 00	@	11 00
Shipping culls, (in. box,)	8 50	@	10 00
Dressing inch,	11 50	@	13 00
Flooring, 1¼ & 1½ in,	12 00	@	13 00
Joists ing and scantling,	9 50	@	10 50
Mill run sidings	12 00	@	14 00
Pickings	17 00	@	20 00
Clear and pickings	25 00	@	28 00
Lath	1 25	@	1 40
Shingles, No. 1	2 10	@	2 20
No. 2	1 40	@	1 60

LONDON, ONT.

Common Lumber	$10 00	@	12 00
Stock boards	13 00	@	15 00
Clear in. and 1½ to 2 in.	25 00	@	30 00
Bill stuff, up to 16 feet		@	13 00
over 16	13 00	@	14 00
Lath, per 1000 feet		@	4 00
Shingles No, 2, per M		@	2 65
per square		@	1 90

OTTAWA.

The following are quotations in the Ottawa market:—

12 in. stocks, good	$18 00	@	20 00
12 " S. culls	10 00	@	10 50
10 " good	16 00	@	18 00
10 " S. culls	9 50	@	10 50
Strips, good	17 00	@	20 00
" culls	6 50	@	7 50
Sidings, 1¼, 1½, and 2 in., good	23 90	@	26 00
" " culls	9 00	@	10 00
Lath (₩ 1.000 pcs.)	0 00	@	1 00
Deals (₩ Quebec standard) 1st	0 00	@	110 00
Deals (₩ Quebec standard) 2nd	0 00	@	65 00
Deals (₩ Quebec standard) 3rd	0 00	@	58 50
Cull deals (₩ M. ft.)	6 50	@	8 50

FREIGHT.

To Montreal $1.15; Quebec, $2; Burlington, $2; Whitehall, $1.25; Albany, $3.50; New York, $4.

OSWEGO, N. Y.

Three uppers	$38 00	@	40 00
Pickings	28 00	@	30 00
Pine, common	20 00	@	22 00
Common	14 00	@	16 00
Culls	12 00	@	14 00
Mill run lots	16 00	@	20 00
Sidings, selected, 1 inch	28 00	@	32 00
1¼ inch	28 00	@	35 00
Mill run, 1x10, 13 to 16 feet	16 00	@	20 00
Selected	20 00	@	25 00
shippers	15 00	@	16 00
Mill run, 1 and 1¼ in. strips	15 00	@	18 00
Culls, selected	20 00	@	24 00
x6 selected, for clapboards	24 00	@	35 00
Shingles, XXX, 18 in. pine	3 00	@	3 50
XXX 18 in. cedar	3 00	@	3 10
Lath	1 50	@	1.75

BUFFALO.

We quote cargo lots:

Uppers	$35 00	@	40 00
Common	16 00	@	19 00
Culls	11 00	@	12 00
Assorted lumber in car lots or boat loads:			
3 uppers 1 inch	$	@	40 00
Do. 1¼ and 1½ in	40 00	@	42 00
Do. 2 in	45 00	@	47 00
Do. 2½, 3 and 4 in. special			
Pickings 1 inch	28 00	@	30 00
" 1¼ and 1½ in	33 00	@	35 00
" 2, 3, and 4 in, special	22 00	@	00 00
Shelving	22 00	@	24 00
Cutting up	22 00	@	24 00
Sidings, com., 1 in	16 50	@	17 00
" 1¼ in. and over	17 00	@	20 00
Common, stocks	16 50	@	17 00
Box, all thicknesses	13 00	@	14 00
18 in XXX shingles	3 60	@	3 70
18 inch clear bats	2 60	@	2 70
Lath	1 75	@	1 80

We quote wholesale prices of hardwood lumber, delivered on cars or boat:

Walnut ½ inch clear	$65 00
⅝ inch, 1sts and 2nds	70 00
¾ inch, 1sts and 2nds, 14 feet coffin stock	73 00
1 inch 1sts and 2nds	75 00
1¼, 1½ 1¾ and 2 inch	77 00
2½ inch and thicker	80 00
counters	150 00
newels 5x5 to 10x10	95 00
common m. & thicker	55 00
culls, inch	35 00
culls, 1¼ inch	35 00
White ash, Ohio 1st and fine 2nds	35 00
Whitewood, inch	30 00
⅝ inch	28 00
¾ in coffin stock, 14 ft	30 00
square, 4x4 to 10x10	33 00
Chestnuts, 1sts and fine 2nds,	32 00
Maple	25 00
White oak, Ohio	35 00
Cherry, inch and thicker	55 00
Butternut	50 00
Hickory, best Ohio	35 00

CHICAGO.

YARD RATES.

First and second clear, 1@ 1¼ in	$43 00		
First and 2d clear, 2 in	45 00		
Third clear, 1¼ @ 2 in	38 00		
Third clear, 1 inch	38 00		
1st and 2d clear dressed siding	20 00		
1st com. dressed siding	19 50		
Second common	17 50		
Flooring, 1st com. dressed	34 00		
Flooring, 2d com. dressed	32 00		
Flooring, 3d com. dressed	24 00		
Box bds, A 13 in. and up	43 00		
Box bds, B, 14 in. and up	37 00		
Box boards, C	25 00		
A stock boards, 10 @ 12 in., rough	37 00		
B stock bds, 10 @ 12 in	35 00		
C stock bds, 10 @ 12 in	27 00		
Common stock boards	17 00		
Cull boards	$10 00	@	11 00
Fencing No. 1	13 50		
Fencing, No. 2	11 50		
Common board	11 50	@	12 50
Dimension stuff			
Dimension stuff 20 @ 30	12 50	@	20 00
Small timber, 4 x 4 to 8 x 8			12 00
Round posts, cedar			15 00
Pickets, dressed and headed, flat			15 00
Pickets do., square			20 00
Pickets, rough			14 00
Clear shingles			3 25
Extra "A" shingles			2 65
Standard "A" dry shingles			2 40
Shaded "A" shingles			1 10
No. 1 shingles			1 00
Cedar shingles			2 25
Lath, dry			2 50

DETROIT.

Yard rates, continue as follows:

Uppers, all thicknesses	$40 00	@	45 09
Selects	35 00	@	38 00
Fine common, thick		@	30 00
No. 1 common stock, 1x12	16 00	@	18 00
Common shippers, 1x12	13 00	@	14 00
Flooring, select		@	25 00
common		@	22 00
Ripping, matched		@	16 00
Siding, clear		@	24 00
A select		@	20 00
B common		@	16 00
Ceiling, select		@	30 00
common		@	25 00
Shipping culls		@	12 00
Mill cull boards		@	10 00
Dimension or bill stuff to 16 feet		@	14 00
18 to 24 feet		@	15 00
longer than 24 feet	16 00	@	20 00
Shingles, clear, 18 inch		@	4 00
6 in. b clear, 18 inch		@	2 75
Lath		@	2 25

ALBANY.

FREIGHTS.

To New York ₩ M. feet	$ 1 00
To Bridgeport	1 25
To New Haven	1 25
To Providence	2 00
To Pawtucket	2 25
To Norwalk	1 25
To Hartford	2 00
To Middletown	1 75
To New London	1 75
To Philadelphia	2 00

Quotations at the yards are as follows:

Pine, clear, ₩ M	48@60
Pine, fourths	43@55
Pine, selects	38@45
Pine, good box	17@28
Pine, common box	14@17
Pine, 10 in plank, each	38@42
Pine, 10 in plank, culls	21@23
Pine boards, 10 in	25@28
Pine, 10 in boards, culls, each	17@18
Pine, 10 in. boards, 16 ft. ₩ M	28 00
Pine, 12 in. boards, 16 ft	28 00
Pine 12 in. boards, 13 ft	28 00
Pine, 1¼ in., siding, select	42 00
Pine, 1¼ in. siding common	18 00
Pine, 1-in. siding, selected	40 00
Pine, 1-in. siding, common	16 00
Spruce boards, each	16
Spruce, plank, 1¼ in., each	29
Spruce, plank, 2 in., each	30
Spruce, wall strips, each	11@11½
Hemlock, boards, each	13
Hemlock, joist, 4x6 each	30
Hemlock, wall strips, 2x4	9½
Black walnut, good, ₩ M	85 00
Black walnut, ⅝ in	78 00
Black walnut, ¾ in	78 00
Sycamore, 1 in	28 00
Sycamore, ⅝ in	22 00
White wood 1 inch and thicker	40 00
White wood, ⅝ inch	30 00
Ash, good	43 00
Ash, second quality	30 00
Cherry, good	60 00
Cherry, common	35 00
Oak, good	42 00
Oak, second quality	25 00
Basswood	25 00
Hickory	40 00
Maple, Canada	30 00
Maple, American	28 00
Chestnut	40 00
Shingles, shaved, pine, m	6 00
" " 2d quality	4 50
Shingles, extra, sawed, pine	4 25
Shingles, clear, sawed, pine	3 25
Shingles, cedar, mixed	2 75
Shingles, hemlock	2 00
Lath, hemlock	1 50
Lath, spruce	2 00

CLEVELAND.

ROUGH LUMBER

Uppers, thick	$45 00
inch	42 00
Box thick	36 00
inch	32 00
2½ 3 and 4 in clears each	
Flooring strips, 6 in, No. 1	34 00
2	24 00
Fencing strips, 6-in, No. 1	16 00
No. 2	14 00
Select common, thick	28 00
inch	24 00
Common	15 00
Culls	12 00
Bill stuff No. 1 12 in	25 00
No 2	16 00
No	14 00
No 1 18 ft	20 00
No 2 18 ft	18 00
No 3 18 ft	15 00
Bill stuff over 18 ft	13 00
Bill stuff over 18 ft. adds 75c to $1 per ft. per M.	
Shingles, XXX	3 60
clear butts	2 60
Lath	2 25
Surfacing one side adds to the price of rough lumber	1 00
2 sides	1 00
Norway bds and strips	18 00
common	13 00

DRESSED LUMBER.

Flooring and drop siding clear	$40 00
box	30 00
select common	28 00
common	20 00
Siding, ½ in. level clear	00
box	20 00
select common	15 00

Working lumber matching flooring and drop siding, $2; working ½ in. siding, $4.

NOTICE.

Monday, last but one of January next will be the last day for receiving Petitions for Private Bills.

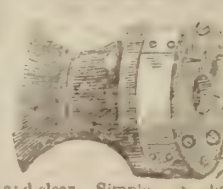
Monday, the thirty-first of January next, will be the last day for introducing Private Bills to the House.

Friday, the eleventh of February next, will be the last day for presenting Reports of Committees relative to Private Bills.

CHARLES T. GILMOUR,
Clerk of the Legislative Assembly.

Toronto, December 6th, 1880.

TELEPHONES.



$5 to $20 per pair

Wire 3½ to 5c. per rod Sent by mail on receipt of price.

First Prize at Industrial Exhibition, Toronto, 1879 and 1880. Works two miles. Speaks loud and clear. Simple. No battery or call bell to get out of order. Unsurpassed for economy and efficiency. No infringement on other patents. No royalty or rent to pay. Just the thing for offices, and for business men to connect their residence and store. FARMERS' put up line to your neighbours for mutual advantage. AGENTS WANTED. Exclusive territory given to live men.

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ESTABLISHED 1874

Electro Curative Appliances

Relieve and cure Spinal Complaints, General and Nervous Debility, Rheumatism, Gout, Nervousness, Liver, Kidney, Lung, Throat and Chest Complaints, Neuralgia, Dyspepsia, Indigestion, Sprains, Concussion, Sleeplessness, Colds, Indigestion.

Ask for Norman's Electric Belts and see that the name is on the buckle, as there are worthless imitations in the market.

A. NORMAN, 4 Queen Street East, Toronto.

N.B.—Trusses for Rupture, Abdominal, Suspensory, and Electric Belts at reasonable prices.

SAVE YOUR COAL

J. W. ELLIOT'S PATENT SAVER.

The First Object—Is to produce the greatest amount of heat from a given amount of fuel, and is gained by an arrangement of the three way draft passage and some twelve feet of flue pipe, which is bent down and around the base, and the heat is absorbed by the atmosphere through direct radiation from every part of the stove. Another object of the invention is to secure for heating purposes the greatest possible benefit of the fire contained in the stove, and a accomplished by placing around the body of the stove if series of internally projecting pockets overlapping the fire pot, and so formed that the air of the room is admitted into the lower end of the pockets, and, after passing through them, re-enters the room, having become intensely heated through contact with the inner sides of the said pockets, which are immediately over the hottest part of the fire, thereby producing far greater results from a given amount of fuel than any other stove. *Second Object*—An evaporator which is a part of the stove. The cover becomes a water tank, and is an effective evaporater; the pivot on which it turns is an iron tube screwed into the base of the tank, while the lower end is closed and rests in a pocket inside the dome, thereby producing a greater or less amount of vapor in proportion to the intensity of the heat. *Third Object*—There is a double heater, by means of which heat can be conveyed to an apartment above, and supplied with sufficient vapor from the tank. *Fourth Object*—A combined hot air and steam bath can be obtained by closing the damper in the water tank, and causing all the vapor to mingle with the ascending heat. *Fifth Object*—

The Stove becomes Simplified and easy to Control

All hinged doors and objectionable fittings are abandoned, and are replaced by mica lights with metal tips attached, by means of which the mica may be sprung into place, or removed and cleaned with a dry cloth, or replaced when the stove is red hot, without burning one's fingers At the base of the mica lights eyelets are placed, through which a constant flow of air causes all the gas or smoke to be consumed or to pass off. *Sixth Object*—A base plate of cast iron in the place of zinc or other perishable material. The base plate is raised sufficient for the cold air on the floor to pass up through its raised and hollow cone-shape to the stove, and is rarified, and by this means a constant circulation is continued until an even summer heat is obtained. The circulation above described causes the floor to remain cool underneath the stove. The stoves are altogether cast iron; and the slow consumption of fuel, the direct radiation from all its heated surface, ensures them to last any number of years and to produce no clinkers or waste.

There are two grates, similar in form to the base of a circular basket; the centre grate is rotated to the right or left by the lever a short distance, and by moving the lever still further to the right or left both grates are worked.

To light a fire close all the drafts in the base of the stove open a direct draft in the smoke flue; fill up to the base a the feeder with fine coal, leaving sufficient space for draft, on the coal place the lightwood, leave the tank cover off slightly for draft, until the fire has taken, close the tank cover and open the draft in front.

For further information apply to

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43 and 45 KING STREET WEST,
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JAMS D. McARTHUR, - - - - Manager.

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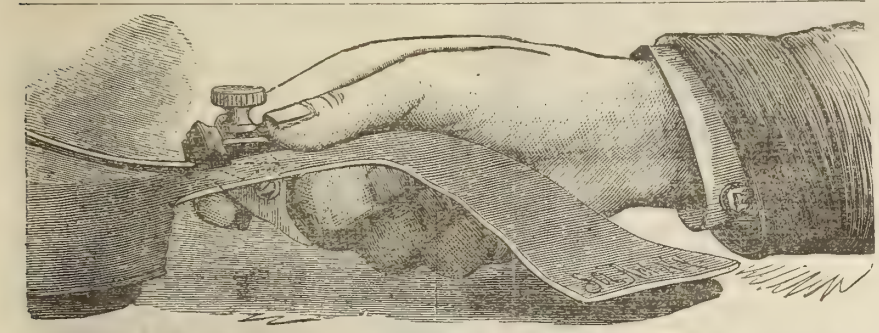

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Is the first absolutely perfect tool ever made for cutting all kinds of lace leather either thick or thin. Lacings of any length or width may be cut and pointed by the most inexperienced. The price paid for cutting one side of leather will buy a Cutter with which you can cut *just* the size lacings needed for each particular belt.

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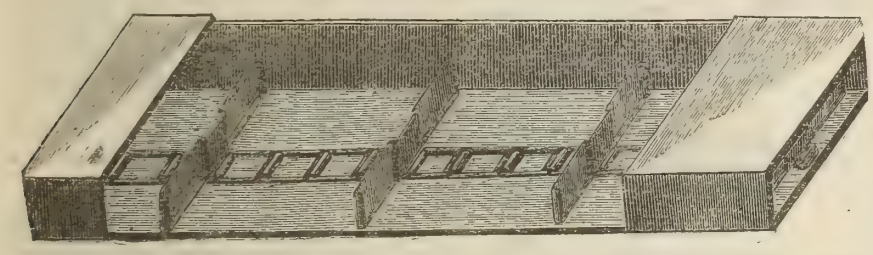
No Friction, Tension, Stretching; runs Fast, Slow, Perpendicular, Horizontal or Half Twist.



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MONTHLY

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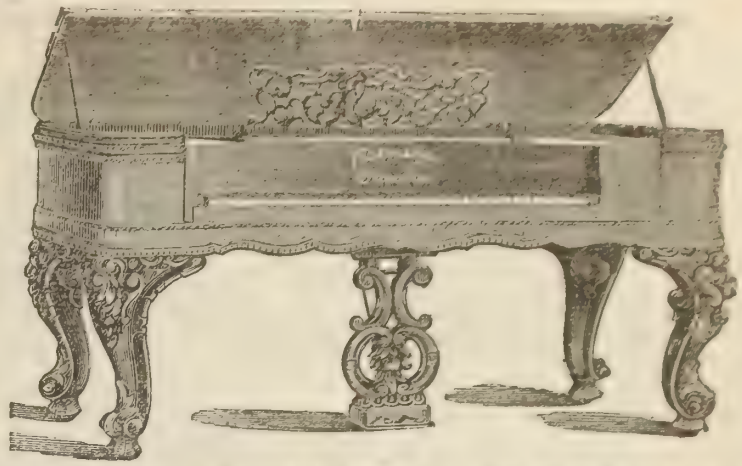

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GENERAL WOOD WORKERS,

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Stair Newels, Balusters, Hand Rails,

Ramps, Mouldings, Brackets, Fence-pickets,

and everything requisite for the finishing of Houses, etc.

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Planing Mill, No. 57 Ontario St. - - - - Mills at Elmvale.

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Largest and Best Stock of Lumber in the City at Lowest Prices.

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SASH, DOORS AND BLINDS, ETC., ETC.,

Which we sell at Lower Rates than they can be had anywhere else in the City,

SPECIAL ATTENTION GIVEN TO FILLING OF BILLS OF EVERY DESCRIPTION.

Houses built on easy terms of payment. Houses to rent or for sale in any part of the city

☞Best price paid for Lumber of all kinds, cedar posts, &c.☜

A Turkish Wedding.

THE ELABORATE CELEBRATION CUSTOMARY WHEN YOUNG PEOPLE OF QUALITY ARE UNITED IN THE LAND OF THE CRESCENT.

A very pretty and more than pretty picture of a Turkish wedding comes to us from a gentleman living in the village of Selonik, the ancient Salonica, where Jews, Wallachs, Turks, Greeks, and Albanians now dwell together in amity. Aside from the Balram which follows the Ramadan, or month of fasting, and the Kurban-Balram, the Turk knows but one great festival—that of his marriage. For the rest, his life is occupied with his business and family affairs, and even on Friday he has but to go through his devotions in the mosque after which he returns again to worldly things. Even the two great festivals mentioned have, for the most part, lost their interest in the larger cities, and is is only in the provinces that the old manners and customs still prevail, and how pleasant and patriarchial in some of its phases the old marriage festival is told in the account of this correspondent.

He was invited to the wedding of Ali Nisa Bey, the son of his friend Mahmud Bey, a man of the highest consideration and respect, and known through all the neighbouring districts, and consequently the festival was to be more brilliant than usual, and was looked upon as a matter beside which all other events were but as the light dust of the balance. No less than three score guests had been invited to the house of Mahmud Bey at Kawadar, the seat of the aristocracy of Kikwesch. Having at length arrived at this place, all, in company with Mahmud Bey, betook themselves to the house of Feta Bey, the father of the chosen bride, where they met about fifty other guests, among whom was the Chief Imaun of the city. After salutations had been exchanged and they had partaken of coffee, there entered two persons, each accompanied by two witnesses; the first announced himself as the representative of the bridegroom, and the second as the representative of the bride, and, presenting their witnesses expressed the desire of their principals to be united in marriage.

Then the Imaun inquired of him who represented the bride, "Hast thou given Hairije Hanum, the daughter of Feta Bey, to wife unto Ali Nisa Bey, the son of Manmud Bey?" and thrice was made answer, "I have given her;" and so also was it with him who represented the bridegroom. Then Imaun arose and said: "By the virtue of my office in the presence of all these witnesses, I declare the marriage of Ali Nisa Bey, and Hairije Hanum." He then prayed and the marriage was finished. The guests then left the room, and as each passed the door he invoked good fortune upon the house. On the following day the feast began which was to last through two weeks. A donvet teskeressl (note of invitation) was sent abroad to many people saying that on certain days they were welcome to share the hospitality of the great family of Mahmud Bey. These invitations were each soon followed by a present to the invited guests of a sheep, an ox, or a cow. The last two days of the festival were reserved exclusively for the trusted friends and relatives of the family. There were wrestling matches between herculean athletes dressed as to their nether parts in tight fitting leather breeches, but with their upper parts bared and oiled. Each smote his hands, slapped his knees, and the two sprang round each other ever watchful for a favourable opportunity to grapple. Round and round they went till at last one suddenly sprang upon his opponent and a lively struggle ensued, neither succeeding in throwing the other. They separated and rappled again, trying every trick save tripping; they fell on their knees and on their breasts, but it was only when one had thrown the other and held his shoulders on the ground that it was considered a good fall, the victor receiving a universal "afferim" or bravo from the spectators. In the second round the antagonists clapped their hands and sprang round each other for a full hour before they came to close quarters, and one, catching the other by the right leg, lifted him off his feet, and this also was looked upon as a winning of the bout and was greeted with the afferim. The defeated athlete then made a low reverence to his conqueror, who extended to him his hand and then embraced him. The prize was an ox, and after it had been awarded, the two wrestlers passed through the crowd and received gratuities which were afterwards equally divided between them. In the evening the party returned to the house, where Mahmud Bey entertained them, and they made themselves comfortable on couches, smoking chibouks and drinking raki, a liquor made with anise which the Turks drink before partaking of the evening meal. The entertainment was varied with music, the orchestra consisting of two violins, a clarionet, a tambourine, a small drum, and, above all, a "canun"—an instrument resembling the zither, only larger. In honour of the Frankish guest, Italian and French music was at first played, but after a most unearthly fashion, out of all time and tune. At the request of the Frank, some Scharki and Makams (Persian and Arabian) pieces were performed which, in spite of their seeming monotony, were still intoned with a peculiarly charming melody, and were played much better than the French and Italian music. Then came the time to see an Arab dance. Two Gypsy girls dressed in sort, bright coloured garments entered the room and began to move, slowly at first and gently, and then in a *tempo staccato*, till this became quicker and quicker and ended in a bewildering whirl. The steps were a companied with all possible graceful movements of the body and the music was marked with the striking together of thimbles, one on the thumb and one on the middle finger and used as castanets. As tedia ce grew wilder and wilder and the girls grew into Mænads, many a "Mashallah!" and many an "Afferim" was breathed out by the enraptured company. As it drew near midnight two servants appeared with silvered yataghans and richly mounted pistols in their girdles, one bearing napkins shot through with gold and silver threads, and the other a ewer and basin, both of solid silver, and poured water on the hands of the guests. Then a low tripod was placed in the centre of the room and on it a large copper salver, on the rim of which were bits of bread and delicately carved wooden spoons, while in the centre a dish containing tschorda (soup), into which had been poured, after the Turkish fashion, eggs beaten with vinegar. Around this board the guests sat cross-legged, the host courteously bade them "bujurun"—to command him—and then they fell to, dipping the bread in the soup. After the soup came a baked lamb, stuffed, a pudding, a potpourri of meats, baked meat again, several ragouts with hashed meat, boiled pulse, the whole ending with a rice pudding. Then all arose, washed their hands—first time with soap—and partook of coffee, followed by some pleasant eat, and then to bed. In the morning they were awakened by music beneath their windows, and two hours afterward they went to see the outset of the bride. The linen clothes, and other household stuff of the bride had come, borne by twelve heavy-laden horses. Six men carried the copper and silver vessels of the bride on trays, some of silver and some of copper. The procession—and how this reminds one of Aladdin!—bearing the marriage portion, left the bride's house, passed up the two principal streets and then reached the house of the bridegroom. The portion itself might have been taken for an oriental bazaar *in petto*. May the marriage be blessed. Inschallah!

The Natural Hstiory of Dress

The pleasure derived from wearing attractive garments can not be identified by the title of a purely æsthetic enjoyment. It is the monopoly of the individual who thus adorns himself; and the pleasures of art, properly so called, are above all monopoly. The impulse must, one supposes, from the day when primitive man began to paint his body or adorn his head with feathers, have led to a constant variation in his style of apparel. It is of the nature of the passion to be insatiable in its craving for change and novelty. We look for an element of novelty even in a work of purely impersonal art, and in the personal art of self adornment this demand is omnipotent. Hence what answers to spontaneous variation in the region of dress, would commonly be the outcome of this restless desire to look finer than one's neighbor's. In this way the feeling for the ornamental side of dress has subserved the development of it as a utility. Changes introduced by individual fancy and the love of the novel and striking, would be permanently adopted when found to bring some advantage, as, for example, increase of warmth. It may, indeed, be said that the growth of dress in mere volume and number of distinct parts has been greatly promoted in the first instance by this impulse of self adornment. The rude love of beauty shows itself in an admiration of mere quantity; and the men and women who managed to amplify their garments would clearly by so doing attain a richer decorative effect.

WERE the Centaures any immediate kin to the half tribe of Manss-eh?

REID & CO., WHOLESALE LUMBER DEALERS. Lumber, lath, shingles, & car lots to suit customers. Best culls in the market from $6 to $7 per M.

OFFICE ON DOCK—Esplanade, foot of Sherbourne Street, Toronto. 2n

IN PRESS—TO BE PUBLISHED IN JANUARY, 1881.

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Gazetteer of British North America

Containing the latest and most authentic descriptions of over 7,500 Cities, Towns and Villages in the Provinces of Ontario Quebec, Nova Scotia, New Brunswick, Newfoundland, Prince Edward Island, Manitoba, British Columbia and the North-West Territories, and other general information, drawn from official sources, as to the names, locality, extent, ect., of over 1 800 Lakes and Rivers; a TABLE OF ROUTES, showing the proximity of the Railroad Stations, and Sea Lake and River Ports, to the Cities, Towns, Villages, etc., in the several Provinces, (his Table will be found invaluable); and a new Coloured Map of the Dominion of Canada. Edited by P. A. Crossby, assisted by a corps of Writers. Subscribers' names respectfully solicited Agents wanted. ☞PRICE $3—Payable on Delivery.

JOHN LOVELL & SON, Publishers.

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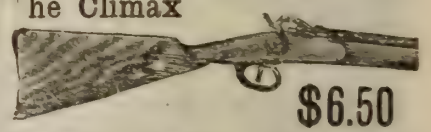

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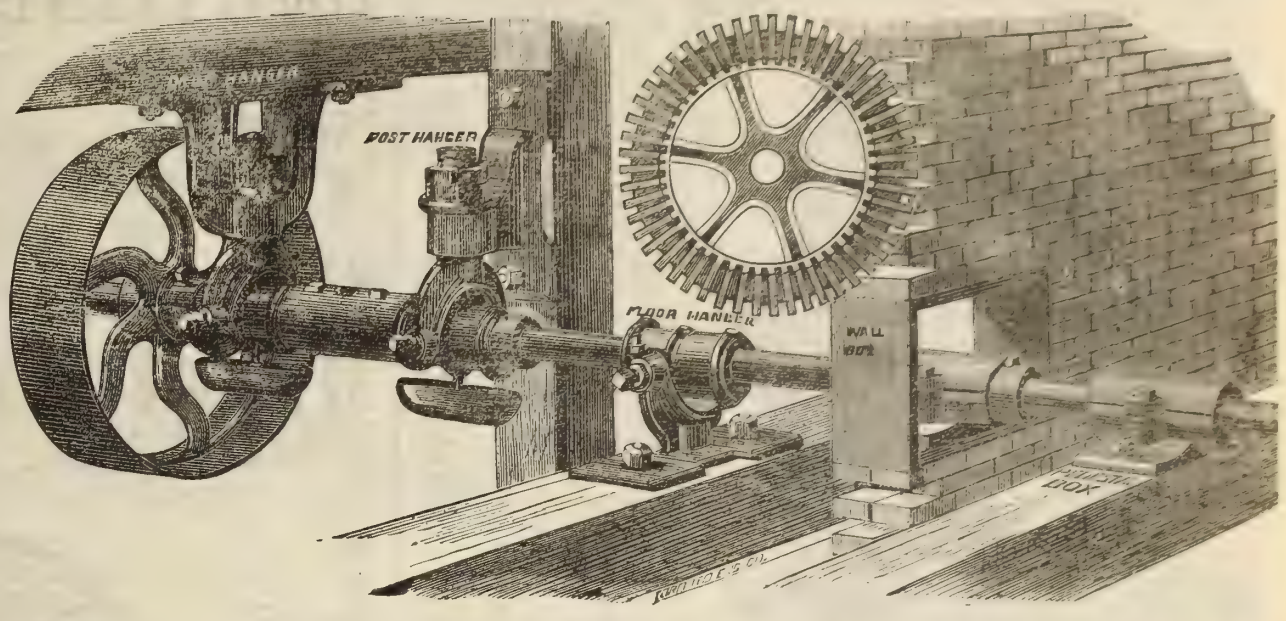

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NAME.	ASSETS.	INTEREST.	RATE.
Equitable, New York	$54,195,368	$1,950,680	5.70
Union Mutual	6,874,249	344,591	5.01
New York Life	35,630,567	2,021,887	5.67
London and Lancashire	851,720	37,325	4.38
Reliance, of London	2,379 410	109,720	4 61
Standard, of Edinburgh	25,939,635	1,120,255	4.31
Canada Life	3,070,988	199,504	6 49
Sun Mutual, Montreal	319,178	21,774	6.82
Mutual, Hamilton	88,068	4,684	5.26
Average	$12,149,797	$644,436	5.35
ÆTNA LIFE,	$23,761,342	$1,856,710	7.81
5 35 per cent. upon $23,761,342 is only		$1,271,131	

Upwards of **$585,000** was therefore realized in 1879 by the ÆTNA'S management from its **$23,761,342** over and above the average of the nine Companies. This is a point of great importance to persons desiring to insure their lives on the "WITH PROFITS" plan. ☞All the profits in the **ÆTNA'S** Mutual Department belong to the Policyholders.

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$1000.

NAMES OF COMPANIES.	*Endowments, with Profits, at Death, or the end of* 10 Y'RS.	15 Y'RS.	20 Y'RS.	*Death only, without Profits.* AGE 30.	AGE 40.	AGE 60
Canada Life	$110.40	$68.80	$50 30	$18.20	$25.90	$64.30
Citizens', Montreal	103.70	69.60	53.40	19.20	26.20	63.60
Confederation	104.65	68.70	50.05	19.08	26.04	62.76
Mutual, Hamilton	104.50	68.70	50.00	.....	.....	.....
Sun, of Montreal	106 90	69 40	51.70	16.90	24.60	63.90
Equitable of New York	106.90	69.49	51.78	.....	.....	.....
Union Mutual	106.90	69.49	51.78	.....	.....	.....
London & Lancashire	106.85	69.92	51.56	18.89	25.05	63.58
Star	.....	70.64	52.60	22.92	30.49	67.91
Standard	.....	.....	51.97	20.87	28.15	65.96
Average Premium	106.35	69.41	51.50	19.51	26.63	64.58
ÆTNA LIFE	97.43	61.46	48.77	17.20	24.37	61.98
ANNUAL DIFFERENCE	8.92	4.95	2.73	2.31	2.26	2.60

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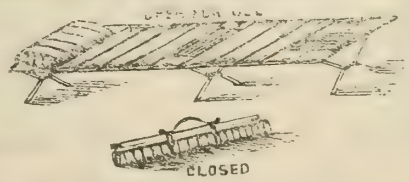

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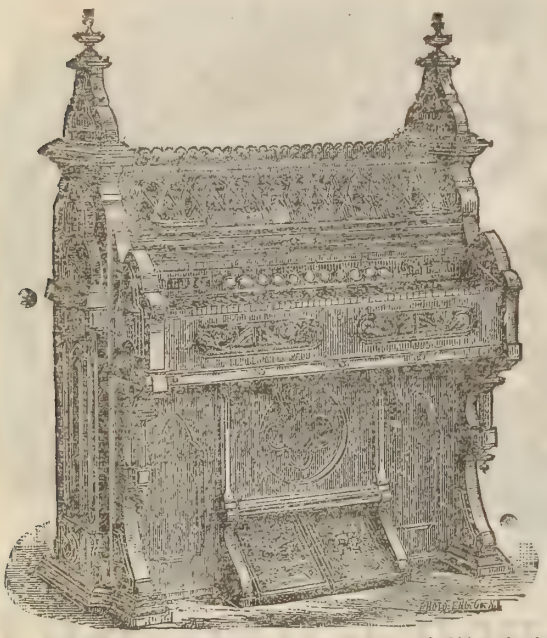

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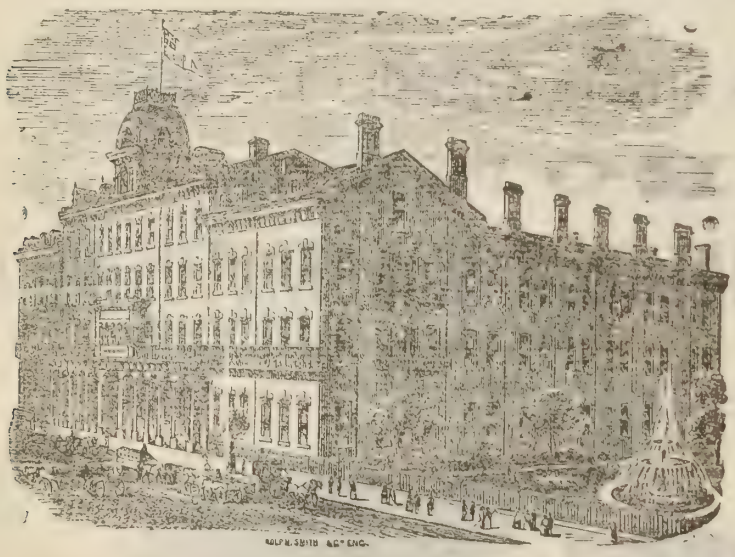

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VOL. I.—NO. 6. TORONTO, ONT., DECEMBER 31, 1880. $2 PER ANNUM.

SAVE THE TREES.

Whatever opinion may be held by the owners of the timber lands regarding the nearness of the exhaustion of the supply of pine and other available building timber, it cannot be a question says the *Lumberman's Gazette* with any intellectual person that it would be well if the woodsman's vandal axe were stayed against every promising Norway, hemlock or whitewood tree which may now be regarded as of no merchantable value. It may be said, these trees are of no use for the manufacture of lumber, and this may be true when compared with our more desirable pine. But it is nevertheless true that they may be made available for many of the purposes for which white pine is now used. Norway is coming into use to a great extent for bridge timber and bill stuff, but not to the extent which it might be made available. While it is not so easily worked as white pine it is quite as enduring and in moist situations probably more so, being highly impregnated with pitch. For timbers, joist and scantling, there can be no objection to it, while its use for these purposes would conserve so much pine which is more available for other uses. Norway has been used for finishing lumber and presents a pleasing effect when finished in oil, the grain making it quite ornamental. Hemlock may be used for the same purposes as Norway pine, except it cannot be so freely exposed to moisture. Indeed it requires to be kept dry in order to secure its greatest durability. While not useful as a finishing lumber or available in so many situations as pine, there are many uses to which hemlock can be put where it would answer the same purpose. For beams, joists and sills, roofing boards, sheathing boards, rough fencing, and the like, it would be found an admirable substitute, since its limited adaptability would necessarily make it cheaper than pine. It is a strong durable wood, and we have seen it made into very good lumber. There is a vast deal of it still in Michigan, but it is going the way of the pine, only in a more vandalish way. The timber is being sacrificed for the bark, which is stripped from the tree for tanning purposes and the trunk left to rot upon the ground. Whitewood is quite a desirable timber, but it is not very plentiful in the northwest. In the south it is abundant and known—in some parts, at least—as poplar, and is as highly esteemed. There is some of it in Michigan. If the lugubrious prognostications regarding the near approach of the total destruction of "our" forests be well founded, even the apparently worthless-for-any-purpose-except-to-swindle-wood-buyers basswood may some day have a value as a lumber yielding woold —providing any of it is left standing after the pine has disappeared. If the present generation cannot be brought down to the use of any of the woods we have referred to, but must have the very finest grades of timber now growing in the forests, regardless of posterity, it would be only just to the future generations that the conservative policy be adopted towards the coarser products of the forest, to the end that our children's children may have a chance to shin around among them and put them where they will do more good than being added to the soil by rotting, or the atmosphere by burning. At the present rate of demolition it is certain the woods will not always be with us, and it were better to treat them so that we shall not be quite consumed by remorse when they shall disappear. It will be a sufficient source of grief that we can coin their stalwart trunks into ducats no more.

To the above, the *Northwestern Lumberman* replies, and states that while the article contains many suggestions which in their elementary character are useful and truthful, is yet laden with so many errors and misstatements as to be deserving of severe criticism, coming as it does from a journal which is publicly supposed to speak intelligently upon subjects pertaining to the timber supply of the country. Its assertion that Norway, hemlock and whitewood have no merchantable value and are of no use for the the manufacture of lumber, will strike the average lumberman with surprise, especially those east and west of the Saginaw Valley. Of the 1,608,000 feet of lumber constituting the receipts of the past season at Chicago, we believe we underestimate when we assert that fully one-fifth, or 300,000,000 feet was Norway, which while not a prime favourite like white pine is still recognized as a prominent and indispensable article in the lumber trade, bearing a price but a trifle below that of white pine. Again the *Gazette* is in error in asserting that Norway is quite as enduring as white pine in *moist* situations. Exactly the reverse of this proposition is the truth. Norway is of little or no value except when perfectly dry, or else perfectly submerged. Moisture is a deadlier enemy to Norway than to white pine. For joist it is excellent and durable because in this position it is kept dry, but a Norway sill is avoided by every builder when any other material can be obtained, except when it is to be placed in a position where it has a perfect circulation of air around it. As bridge timber it is avoided, and is seldom used where a thickness of over six inches is desired, from its liability to dry rot when used as timber. Hemlock will stand more moisture than Norway pine which is the most liable to decay of any of the *coniferous* varieties of timber. The assertion that hemlock has no merchantable value will probably be read with surprise by the lumber dealers and manufacturers of Maine, Massachusetts and Pennsylvania, the former of whom manufacture in the ratio of 17 per cent. of hemlock to 80 per cent. of spruce and three per cent of pine. Hemlock is among the standard quotations of the Boston market at from $11 to $13 50, with spruce at $13 to $17, and coarse grades of pine at $12 to $18. Hemlock has to but a small extent as yet been utilized in the West. but this is simply because of a prejudice, induced by the greater plentifulness of white pine and its low value, combined with its quality of being graded and thus yielding a larger measure of profit, while hemlock costing equally as much to manufacture, presents no chance fat "pickings" or speculative grades, If in this sense the *Gazette* refers to it as having no merchantable value it is measurably correct. Whitewood, in some sections termed poplar, is one of the most plentiful in the supply of timber woods of the Southwestern and Middle States, and one of the most valuable woods of local commerce. It is true that but little is found in the North, but it is held at a value equal to the best pine. The *Gazette* has but to scan its own pages of pine quotations to learn that in Albany, Philadelphia and Boston, whitewood or poplar ranks in value with ash, oak, maple and hickory.

The most astounding statement which the *Gazette* makes however, is in its allusions to "even the apparently worthless-for-any-purpose - except - to-swindle - wood-buyers bass wood" which it asserts "may some day have a value as a lumber yielding wood." The demand throughout the United States today for this "worthless for any purpose" timber, so far exceeds the supply, that dealers are hunting for it in every direction. The wants columns of the LUMBERMAN have carried an advertisement of one Chicago firm for the past six weeks or more, soliciting parties who can supply it to make themselves known. In the city of Chicago alone probably 10,000,000 feet per year would be taken if it could be had. It is extensively used by the furniture manufacturers, it is an indispensable wood in carriage making and sleigh manufacture, and the sewing machine case manufacturers of this country would be glad to day to contract for 100,000,000 feet of this "worthless for any purpose" timber, and would not need much urging to double the order. The market value of this "worthless for any purpose" timber is today in Chicago from $20 to $30. Boston quotes it at 25 to 27, with § at $20 to $22. Albany $20 to $25. Milwaukee $20 to $30, in the light of which figures the assertion of "worthlessness" seems anomalous.

The *Gazette* is in error in characterizing either of the woods named as worthless or possessing no marketable value. Fortunes are quietly being worked out of all of them and the aggregate trade in each, even in the Northwest is something enormous. Even the despised black ash, formerly considered of value only when the straight grain of a central section of the trunk enabled it to be split into hoops, has of late years taken a high position as an ornamental wood, and we are aware of at least one veneer mill now being erected in the Northwest which will make a business of supplying black ash veneers. The libraries of the Cornell University are fitted up with black ash, a goodly portion of which was cut in the swamps of Bay county, Michigan, for the late John McCraw, whose liberality has done so much for the University.

HOW TO BE A SUCCESSFUL SAWYER.

The aim of every workman should be toward superiority in his particular employment. To reach this point experience is of course of the greatest value and absolutely the best teacher. Nevertheless certain rules may be stated, the following of which will greatly assist the aspirant after success in his calling. Other things being equal, a sawyer may reasonably hope to attain to superiority by observing the following directions: 1. Acquire sufficient knowledge of machinery to keep a mill in good repair. Remember that if a knowledge of machinery is a good acquirement one cannot have too much of it. 2. See that both the machinery and saws are in good order. A man cannot do the best work when he is in ill-health, neither can machinery do the best work when it is in ill-repair. 3. Bear in mind it does not follow because one saw will work well that another will do the same on the same mandrel, or that even two saws will hang alike on the same mandrel. On the principle that no two clocks can be made that will tick alike, no two saws can be made that will run alike. 4. It is not well to file all the teeth of circular saws from the same side of the saw, especially if each alternate tooth is bent for the set, but file one-half the teeth from one side of the saw, and of the teeth that are bent from you, so as to leave them on a slight bevel and the outer corner a little the longest. 5, Never file a saw to too sharp or acute angles under the teeth, but on circular lines, as all saws are liable to crack from sharp corners. 6. See that each tooth will do a proportional part of the work, or if a reciprocating saw, keep the cutting points pointed on a straight edge. 7. Keep the teeth of your saws so that they will be widest at the very points of the teeth, otherwise the saws will not work satisfactorily, the tendency of all saws being to wear narrowest at the extreme points. 8. The teeth of all saws should be kept as near a uniform shape and distance apart as possible, in order to keep a circular saw in balance and in condition for cutting.

LA BANQUE NATIONALE.—In the LUMBERMAN of the 15th inst. the name of La Banque Nationale appears in the list of timber manufacturers. We are informed that the Bank is not manufacturing timber on its own account, although like similar institutions it has advanced funds to a few lumbermen.

OUR HERO IN BLACK.

We always spoke of ourselves as a "garrison town," we good folks of Donjonville. And why should we not? Had we not barracks and a company of Foot, and, more than all, a Government chapel and a Government chaplain? What more would you have to constitute a garrison town? We had no fortifications, it is true—nothing, in fact, that, strictly speaking, could be garrisoned—but then we had our noble and massive old castle, with its walls nine feet thick, which had stood a siege of six months by Robert Bruce, and a bombardment of six minutes (two shells did the business) by one of Cromwell's generals. We swore by that castle, we swelled with conscious pride as we spoke of it; and a cynical tourist, who was overheard to describe it as "a gray squat building," narrowly escaped being lynched upon the spot. This ancient fortress had, indeed, degenerated into a common gaol, a fact which somewhat detracted from the romance of its associations; but, despite the painful penitentiary cleaniness and order of its interior, there was still a fine old fendal look about portions of its exterior, and we Donjonvillites could, at any rate, boast that there was not in the three kingdoms any castle of its age in such perfect preservation.

We were a trifle dull, perhaps, at Donjonville—prejudiced persons from neighbouring towns, envious of our historical prestige, sometimes pronounced us stagnant; indeed, a distinguished novelist, who once honoured us with a flying visit, afterwards described Donjonville as "probably the dullest spot on the habitable globe." But, then, how could he possibly be able to judge from seeing Donjonville for a few hours on a miserably wet day; and what weight, after all, does any sensible person attach to the flippant utterances of a shallow scribbler? Not, mind you, that we were not sometimes conscious ourselves of being dull, and at such times we were wont to execrate the dulness of Donjonville with singular unanimity and forcibleness of expression. But then it was one thing to pass unfavourable criticisms upon Donjonville ourselves, and quite another to tolerate such strictures from strangers. On the whole, a pretty wide experience of English provincial towns inclines me to think that Donjonville was, after all, not so dull as many places which make far greater pretensions to liveliness.

We rejoiced of course in a plethora of gossip, for you will generally find that the smaller the town the bigger the gossip; and we had an admirable assortment of gossip-mongers of both sexes, the male element, however, being, I am bound to say, the preponderating one. We had an American "colonel," a retired sea-captain, and a militia major, whom I would have backed both as retailers and inventors of scandal against any three in the world. But rich as we were in accomplished gadabouts, we were even richer in original "characters," whose eccentricities kept us constantly provided with entertainment. Foremost among these, by right of his individuality not less than by right of his social position, stood our Government chaplain, who was also practically the vicar of Donjonville, their being no other "Established" place of worship within a mile of the town. The Rev. Joseph Stickler—"the last of the Sticklers," as he used, half-proudly, half-pathetically, to style himself, for he was a widower, and his only son had been killed at sea—was a remarkable man in many ways. In height he was not more than five feet three inches, but in girth his proportions were gigantic. I have never seen so short a man carry the middle button of his waistcoat in anything like such an advanced position as Joseph Stickler carried his. His knees had been hidden from his sight for years. He had a leg—or I should say two legs, for he possessed the normal complement—of perfect shape. If Mr. Stickler had any mundane vanity, and even the best of men are not without it, his legs were the object of that vanity. It was because he was just a little vain of them, I suspect, that he clung to the good old fashion of knee-breeches, black-silk stockings, and buckled shoes long after the rest of the civilized world had discarded those integuments, though probably, if all the leaders of fashion had possessed such elegant extremities as our Government chaplain, the modern trouser would have been unknown. In deportment the Rev. Joseph Stickler could have given Mr. Turveydrop a lesson. He carried himself with such dignity, that when he stood talking on the parade with "Cunnle" Hiram B. Fulton, a lanky "Down-Easter" of six feet three, the parson struck you as being by far the bigger man of the two. His florid clean-shaven face would have been handsome had it been a trifle less fleshy; and, at any rate, no one could deny that it was a good resolute English face, full of courage and sense.

So much for the Rev. Joseph Stickler's physique. But his manners were even more remarkable than his figure. He had a blunt forcible way of calling a spade a spade, both in the pulpit and in private life, which often shocked persons burdened with a particularly squeamish sense of propriety. I heard him once put an extinguisher upon an affected and foolish lady, who was expatiating on the virtues of the son whom she had just sent to school, by blurting out gruffly and brusquely.

"Humbug, madam, humbug! There never was a boy yet who wasn't a thief and a liar. A good boy is a monstrosity, madam a *lusus naturæ*, sure to come to the gallows or some equally bad end. There's some hope of a bad boy: flog the vice out of him at school, and it's ten to one he'll turn out a decent man when he grows up."

So far you will say that there was not much that was heroic about Joseph Stickler; and possibly, had you "sat under him" and listened to his pulpit utterances, the sound common sense of which was constantly marred by his grotesque habit of stopping in the full flood of his discourse to remonstrate, in the homeliest fashion imaginable, with the drowsy or heedless members of his congregation, you would have probably found it still harder to see anything heroic in our eccentric parson. But for all that he *was* a hero, and this fact I am sure you will admit readily enough before you reach the end of my story. For, whatever Ouida and "Guy Livingstone" may try to persuade you to the contrary, a hero need not by any means be a giant in height and a Hercules in strength, with Norman brow and Grecian nose; indeed, I take it that there have been far more heroes under five feet six inches than over that standard, and far more snub-noses among them than even Roman ones. However, to come back to our muttons, you shall hear why and how Joseph Stickler came to be considered a hero. It was with the younger male portion of the community that he first established his claim to that title, and the manner of it was remarkable.

I have already mentioned our parson's propensity to administer homely, but at the same time fearfully impressive, rebukes to those of his congregation whose conduct seemed to him indecorous during divine service. The most frequent recipients of this verbal chastisement were the unhappy Sunday-school children, whose horribly uncomfortable pens—I cannot call them seats—were immediately facing the pulpit. But the punishment of these unfortunates was not confined to words. The Rev. Joseph Stickler had a sturdy henchman who was as vigorous a disciplinarian as his master, and a scarcely less original and eccentric character. Billy Marks—for such was the somewhat undignified name of this representative of Donjonville Bumbledom—filled a rather nondescript ecclesiastical position: before service he acted as verger, during prayers he acted as clerk, when the sermon commenced he vacated his desk and went aloft to the gallery, where, armed with a long cane, he stationed himself immediately behind the school-children. Heaven help the hapless boy or girl who dared to doze or exhibit the slightest symptoms of inattention during the preacher's discourse! Softly would the artful and lynx-eyed William creep along the cocoa-nut matting until he was within striking distance of his prey, and then the cane was cautiously raised, to descend upon the head or shoulders of the luckless victim with a thwack that sounded all over the building. And if the watchful Billy, whose attention to his master's homily must have been of a rather divided sort, failed to detect a delinquent, the stern voice from the pulpit, which he knew too well, would at once call his attention to the omission. It was on one of these occasions, when Billy was guilty of a dereliction of duty, that the first memorable exploit of our hero in black was achieved. The circumstances were these:

The offices of the "garrison," four in number, occupied a pew in the gallery not far from the *enfants terribles* who were Billy Marks's special charge during sermon-time. It was a warm day in summer, and, what with the heat and the sonorous eloquence of the preacher, there was a general disposition to drowsiness among the congregation which nothing but a strong sense of duty and the exercise of considerable self-control could overcome. Even the vigilant custodian of juvenile morals nodded at his post, and forgot that there was an eagle eye upon him. Suddenly the preacher paused, and, in a voice that had more of sorrow than of anger in it, called "Billy Marks!"

Up to his feet in an instant sprang Billy, conscious of his own backsliding, touched with remorse by the reproachful accents of his master, burning to atone for his fault by some extraordinary display of zeal. The first object which met the zealous and repentant William's eyes, as, confused and only half awake, he glared around him for a victim, was the head of a very young ensign who was peacefully slumbering in the corner of the officers' pew. Without pausing to think of the consequences, Billy brought his cane down, thwack! right upon the scone of the sleeping warrior. That gallant youth sprang instantly upright at the touch of this rude Ithuriel's spear, and gazed round him with a wild bewildered stare. On all sides he saw grinning faces—an audible titter ran through the schoolchildren—sounds suggestive of suppressed cachinnation came from behind pocket-handkerchiefs applied ostensibly to the normal use; the cheeks of his fellow officers were undistinguishable in colour from their uniforms, and their heads were bent in an attitude which could scarcely be accepted as devotional. A ghastly and horrible suspicion stole into the mind of the young ensign that *he* was the object of all this unseemly mirth, and that he had somehow, though he had not the faintest idea how, made himself supremely ridiculous. With crimson and perspiring countenance he sat as rigid as the tinted Venus for the remainder of the sermon, suffering all the agonies of a martyr at Smithfield. Whether the Rev. Joseph Stickler had perceived Billy Mark's mistake or not, no one could tell; he went on imperturbably with his sermon as if nothing had happened; but if he *had* thoroughly realized all that had happened, and I am inclined to suspect that he had, the control which he exercised over his nerves was of itself heroic, and worthy of an ancient Stoic or an Indian brave. Be this as it may, however, the sequel was a scene which none who witnessed it would ever forget.

The barracks were but a short distance from the chapel, both being situated in the imposing and spacious square which Donjonvillites spoke of proudly as "the parade," and which was pronounced by a Donjonville cabinet-maker, who had once visited London, to be far superior to even the world-famed Trafalgar-square. The officers had marched the "garrison" back to barracks, and had retired to their own quarters, before one half of the congregation had emerged from St. Mary's. In the privacy of their own apartments they at once began to "roast" their juvenile and verdant comrade. The senior captain, Spofforth, a portly florid man, who belied his appearance by being really "the coolest hand going," having closed the door, addressed the young ensign with great seriousness.

"You know, Sparkes," he said, "this is not the first time the regiment has been grossly insulted by the chaplain. This abominable outrage is simply the culminating point of a long series of deliberate insults. But now the thing must be promptly stopped. I must insist upon your demanding a public apology at once from Mr. Stickler."

"Ye-es," stammered Sparks, who was exceedingly angry still, and very red in the face, but didn't quite see how his senior's injunctions were to be carried out.

"You will oblige me and your brother officers, Sparkes, by meeting Mr. Stickler as he crosses the parade from the chapel to his house, and immediately demanding an ample apology on behalf of the regiment, which has been outraged in your person."

The recollection of that sounding thwack from Billy Mark's cane rushed into Ensign Sparkes's mind; his blood tingled at the thought of that monstrous indignity, and he answered firmly.

"You may trust me, Captain Spofforth. The dignity of the regiment shall not suffer in my hands. I will go at once and confront Mr. Stickler, and extract an apology from him on the spot."

Big with self-importance as the accredited champion of the regiment, Ensign Sparkes clapped on his shako fiercely, and strode out into the square to exact prompt reparation from the insulter.

Meanwhile, unconscious of all these machinations, the Rev. Joseph Stickler quietly disrobed himself in the vestry, and then proceeded to cross the parade to his house. Just as he was opposite the barrack-gates and in front of the barrack-windows, he became aware of a tall figure, in scarlet, approaching him with rapid steps. In another instant the Rev. Joseph found himself confronted by the insulted subaltern, who, with glaring eyes and flaming cheeks, addressed him thus:

"Sir, I have been most grossly insulted and assaulted by your orders. The whole regiment, sir, has been affronted in my person. I demand an apology!"

"A *what*!" exclaimed the chaplain, falling back, and surveying his interrogator with a look of supreme amazement.

"An apology, sir; an ample apology!" repeated young Sparks hotly.

"Young man," said the Rev. Joseph Stickler severely, "I don't know what this buffoonery means. If it were not so early in the day I should say that you were drunk, sir."

"What, sir!" exclaimed the enraged ensign; "you refuse to apologise—you dare to add to the insult by insinuating that I am not sober! Let me tell you, sir," assuming an air of bellicosity that might have awed even a bubbly-jock, "that if it were not for your cloth, sir, I would give you the d—dest thrashing you ever had in your life!"

The face of the "last of the Sticklers" grew black as thunder; lightning blazed from his eye; his whole body heaved with the volcano of indignation that raged within him. For an instant he seemed petrified, but only for an instant; then, with an agility quite extraordinary in a man of his obesity, he divested himself of his coat, planted his feet firmly and defiantly, and said, with grim irony.

"O, don't let my cloth for a moment interfere with your desire to inflict corporal chastisement. Proceed, sir; you are quite at liberty to thrash me, sir—if you can."

A peal of laughter bursts like a volley of musketry from the vicinity of the barracks. Sparkes glanced hurriedly around; there was the whole "garrison" crowded at the barrack-gates, convulsed with merriment, and there, in the windows of the officers' quarters, was—no, he must be mistaken—yes, a fact!—there was Spofforth himself, holding his sides while the tears ran down his purple face. Too late it flashed upon the unhappy Sparkes that he was both making a fool of himself, and being made a fool of. Sharply turning on his heel with a smothered anathema, which, like the parish-clerk's sweeping curse, seemed to include "all persons that on earth do dwell," Ensign Sparkes hurried back, a piteous spectacle of mingled shame, rage, and discomfiture. Whilst the Rev. Joseph Stickler, as he struggled back into his coat, was distinctly heard to ejaculate.

"Preposterous young puppy! Talk of thrashing me, indeed!"

And so, amid the ill-suppressed applause of the lookers-on, the parson strode, fuming and furious, to his house.

From that moment the Rev. Joseph Stickler was a hero in the eyes of the "garrison" and the youth of Donjonville. Staid and respectable middle-aged society shook its head, and declared that the chaplain had behaved in a most undignified manner, and had quite forgotten what was due to his cloth. I suppose these douce people were right, and that it would have exhausted even the resources of Turveydropian deportment to have carried off such a scene with dignity. But that was the only time that Joseph Stickler was ever known to allow his eccentricity to imperil his dignity; as a rule, the latter was invariably the accompaniment and correction of the former.

Middle-aged propriety, then, might be excused for failing to see anything heroic in conduct which had only won the irreverent admiration of persons addicted to taking a sporting view of even the gravest matters, but not the less among that class had the Rev. Joseph Stickler established himself as a hero. It was not long, however, before even the "unco guid" of Donjonville were compelled to admit that their respected and esteemed, though eccentric, parson was veritably and unmistakably a hero—of the sort which a delighted and sympathetic Sovereign is proud to decorate with the Victoria Cross or the Albert Medal. And this was the startling incident which suddenly revealed to Donjonville the fact that the black coat and knee-breeches of Joseph Stickler incased as brave a man as ever faced a battery or charged a square in all the glory and glitter of scarlet and gold.

On Christmas afternoon as the chaplain was passing the barrack-gates, he noticed that there was something unusual taking place in the courtyard. The soldiers were gathered in excited groups, and there was that indescribable air of agitation about them which is always noticable in a crowd when something tragic is astir. The Rev. Joseph Stickler walked in and inquired the cause of the commotion. He was told that one of the men, a wild fellow named Hennessy, had gone mad with the libations which

he had imbibed at the feastive season, had locked himself in the guard-room, armed himself with a loaded musket, and was threatening to shoot any one who approached him.

"Have you informed the officer on duty?" asked the chaplain.

"The officers, sir, are all away at a dinner-party."

"And where's the sergeant of the guard?"

"Here, sir."

"Well, sergeant, why don't you arrest this man at once and put him in irons?"

The sergeant looked sheepish as he replied,

"Why, you see, sir, it's not as it he was only drunk, but he's reg'lar ravin' mad with *delirium tremens;* he's got every musket in the rack loaded, and he's that desperate he'd pick three or four of us off before we could lay hands upon him. I dursn't chance it, sir."

The chaplain's face grew dour and black; there was a ringing resolute tone of command in his voice as he said,

"Fetch me a blacksmith at once. Tom Baynes is the best man; and tell him to bring his forehammer with him."

A messenger was despatched for the blacksmith. In the interval the chaplain calmly reconnoitred the guard-room, and the soldiers stood looking at him, their voices hushed into whispers, wondering what would come next and what the parson was about to do. They were not long kept in suspense. The messenger returned, bringing with him Tom Baynes the blacksmith, a big, gaunt, powerful man, black with the grime of the forge, girt with his leathern apron, his forehammer on his shoulder. Touching his forelock to the parson, Tom looked at him in some bewilderment. Motioning to the guard-room door, the chaplain moved forwards, saying,

"This way, Baynes."

When the door was reached the voice of the madman was heard within blaspheming horribly, and yelling threats of vengeance against every mother's son of them. The blacksmith paused, and his face lengthened. Here was a queer job; he didn't half like it. He scratched his head and began to reflect, but his reflections were cut short by the chaplain,

"Tom, I want you to break-in that door; a couple of blows will do it."

Tom Baynes hesitated. Then you should have seen our parson. Tom used to say afterwards that he never saw a man "grow so big all on a sudden like." Pointing to the door with a gesture and a tone which there was no disobeying, the chaplain said sternly,

"Baynes, smash-in that guard-room door this instant; and you, sergeant, have you picket ready to rush in and secure the man at once."

"Sergeant, do your duty; arrest that man at once!"

The barrel of Hennessy's musket was directed steadily at the sergeant's head; the sergeant felt uncomfortable, his cheek blanched, and he made a further strategic movement to the rear. The madman gave a fierce derisive yell that might have made any man's blood run cold to hear it.

"Now, you black-coated old devil-dodger, out of the way there, and let me have a clear shot at that sergeant! Out o' the way, I tell ye, or else I'il blow your head to pieces!"

"Sergeant," cried the chaplain, in a voice of thunder, "arrest that man at once!"

"Ha, ha!" roared Hennessy, "he knows better. The first man that passes that door I'll send to hell in quick time."

And in extenuation of the sergeant's backwardness it must be admitted that the fellow looked as if he meant to keep his word. He was a desperate, determined, and ferocious man at any time; but now that he was literally and uncontrollably mad with drink, he was capable of any crime.

"Am I to arrest this man myself, sergeant?" asked the chaplain, in a quiet firm vaice, very different from the angry tone of command he had used a moment before.

"Arrest me, parson! I'd like to see ye try it! If ye put a foot or a hand beyond that doorway, I'll shoot ye down like a dog! If ye don't clear out from where ye are before I count *three*, so help me, I'll fire!"

The parson paid no heed to the raving maniac, but with ineffable disgust and scorn and said to the sergeant,

"What! are you afraid, man? Why, then I suppose a black coat must show you red coats the way, that's all!"

"Clear out o' that!" yelled Henness.y "I give ye fair warning. *One!*"

"Come away, sir; come back. He's a desperate chap, he'll fire; he's mad, sir; there's murder in his eye!" cried half-a-dozen soldiers at once.

"*Two!*" shouted Hennessy.

Without another word the chaplain marched straight up to the madman, who who covered him with his musket as he advanced, and swearing he would shoot the parson dead, pressed the trigger with his finger as he roared, "*Three!*" Every one of the petrified and horror-stricken spectators expected to hear the report, and see the parson's skull shattered. But the keen, resolute, unflinching gray eyes of the brave man, who slowly advanced upon him, fascinated the furious lunatic; there was an aspect of command as well as of dauntless courage in the face and bearing of our hero in black, which must have rresistibly roused the man's instinct of discipline, and paralysed his murderous aim, for he allowed the parson to walk right up till the muzzle of the musket was not a foot from his head. Quietly grasping the weapon in one hand, Joseph Stickler raised the barrel above his head, and that instant the deafening report rang out, and the ball went crashing through the ceiling. So have dropped the discharged musket and seized another from the row that lay all cocked and loaded before him need have been, for Hennessy, only the work of a second. But the chaplain never took his eye of the madman's face, and the fellow was fairly cowed by that calm steady look, which seemed to pierce him throrgh and through. Slowly the parson's hnnd slipped down the barrel till it rested with a firm grasp upon the man's wrist. Then, without turning, he said coolly, with a ring of withering contempt in his tone,

"Here, sergeant, perhaps *now* you'll not be afraid to put this man under arrest!"

The sergeat summoned a couple sf file to assist him; but the madman, whose eyes were still rivetted on the parson's, made no effort at resistance, allowing himself to be seized and led away with a dazed look on his face, as ihough he had been gazing on something that had dazzled and blinded him. Then, amid the ringing cheers of the soldiers, the Rev. Joseph Stickler walked quietly out of the barracks.

Before next morning every man, woman and child in Donjonville had heard of the parson's heroism. Before the next Sunday the fame of it had spread all ronnd the country-side, and curious folks came in from far and near on Sunday evening to stare at the real live hero, who stood there in unheroic gown and bands, and delivered his homely homily as though wholly unconscious of the admiring eyes that were fixed upon him. I suppose no quality of head or heart so entirely wins the admiration of Englishmen as that of cool presence of mind under danger. We like to think and pride ourselves on the fact that it is preeminently a characteristic of the English race. But from the way in which we worship and adore the men who display it, a foreigner might be justified in cherishing the suspicion that we are conscious of its extreme rarity among us, and value it accordingly. I don't think that we Donjonville folks were one whit less plucky than our neighbours; but we must have been secretly conscious that under such circumstances we should hardly have borne ourselves so well as our parson, otherwise we should not have elevated him as we did with one consent, into the position of a hero. We were too proud of possessing a hero to be critical. His enemies and his detractors, and even he was not without these inevitable accompaniments of fame, said he was a glutton. It was a harsh term to use of one whose exquisite taste in gastronomy was to some of us one of the pleasantest features of his characters. He was a genial soul, was Joseph Stickler, when he unbent over those "little suppers," which were veritable *Noctes Ambrosianæ* to those who were permitted to partake of them; for our hero was not only witty himself, but the cause of wit in others. Happy mortals those who were privileged to be guests at these symposia! They could forget that they were in dreary Donjonville, and imagine themselves transported to some gastronomic Paradise, some culinary Elysium. No man is a hero to his valet, if we are to believe Madame Cornuel; but, I take it, a man may be a hero to his cook when that functionary is but the executant of ideas which emanate from the master-mind. Joseph Stickler had an excellent cook, and I am sure that in her eyes he was not one whit less a hero than he was in ours. Nor did the aureola of his heroism lose any of its radiance when he sat at the head of his own supper-table, keenly enjoying our enjoyment of the dainty dishes which had cost him more time and thought, perhaps, than any but an epicure could excuse. Had he had the ordering of the calendar I am sure that both Brillat Savarin and Abbe Delisle would speedily have been canonised as saints; and I am inclined to think they deserve the honour as much as some who figure on the saintly bead-roll. However, it was impossible that the *profanum vulgus*, which feeds, but knows not what it is to eat intelligently, should sympathize with this trait in the character of our hero in black. Nor will I insist upon claiming for that trait the right to be considered as on attribute of heroism, or even in itself to be pronounced heroic. But in the case of Joseph Stickler it had a posthumous reflection of the heroic thrown upon it, which is my excuse for introducing it here.

Our hero was smitten down with sickness; the weeks rolled on, and still we missed his portly figure and familiar face, which for five-and-thirty years had been as constant to Donjonville as the dial of the old Elizabethan clock, which from the castle-turret looked down upon the parade. Then at length came the sad news that we should never again see the "last of the Sticklers" in the flesh. He was dying of atrophy, we were told; he could retain no nourishing food; the daintiest dishes in the world were but a mockery to him now. Humorist as he was, he saw keenly the grim irony of Fate; and the last words he was heard to utter were these, spoken impressively, as he laid his wasted hand upon the arm of his oldest and dearest friend,

"They'll say it was a judgment, and they're right. Tell your friends, when I am gone, that you knew a parson who died of starvation because he had 'made a god of his belly.'"

Such was the hard measure he meted out to himself. But we judged him more leniently. We all, high and low, remembered only his virtues; we felt that we had lost a rare man in our hero in black, the like of whom we should never see again.

A Great Many Snakes.

RETAINING THEIR REPUTATIONS FOR LIVELY DOINGS TO THE CLOSE OF THE SEASON.

While workmen were opening a spring at Ralph's Station, Pa., they found fifty-one snakes secreted therein, where they were hid for the winter. The largest was four feet long.

A colored man at Parson's, Kansas, saved his life by his quick motion of his gun. A snake, 8 feet in length and 12 inches in diameter, was about to attack him, when a charge of shot silenced him.

Jacob Francisco, with some friends, unearthed fourteen copperhead snakes near Carrollton, Ky., and was bitten by one of them. His body swelled to an enormous size, and, although kept dosed with medicines, he suffered much until his death.

Jacob Terwillinger, a farmer in the mountains near Kingston, tells a rattlesnake yarn that is exhilarating. While gathering apples he fell into a bed of rattlesnakes. More than one of the snakes attacked him before he regained his feet, and one was fastened in his clothing. His 12 year old son, who was near, was of little help, but Terwillinger got a rough stick and attacked the snakes. In less than an hour he killed eight rattlesnakes, the largest measuring five feet, and having seventeen rattles. He was bit twice, but says whiskey saved him, and that it isn't bad for any kind of illness.

When Hans Wiger, a German butcher of Harrison, Ark., awoke from his little nap by the roadside, he was terrified to find a rattlesnake of the diamond species coiled about each leg, and both looking him hungrily in the face. He dropped back and lay as one dead, and went into a swoon. How long he remained in that predicament is hard to tell, but sometime after dark both snake uncoiled themselves, and, after crawling under his neck and around his head several times, moved quietly away. Wiger made tracks for the nearest house and fell fainting. After some trouble he was revived, but it was found that during his lying still blood had oozed from his eyes and mouth, and his hair, which he said was before raven black, had almost an iron-gray cast.

THEY have a new way of curing womens' hysterics in India. They tie the patients hands and feet together and then thrust cotton wicks steeped in oil up their nostrils and into her ears. A woman who has had hysterical dumbness will recover her speech n a very short time under this treatment.

PERSONAL.

GENERAL GARFIELD' youngest son, Abe, is quite an artist. One of his favorite drawings is a train of cars, in which everything is so faithfully represented that even an expert would find no part omitted.

THE house of Rothschild has recently been reorganized with a capital of $10,000,000. The financial head of the house, and director in its large operations, is Baron Alphonse Rothschild, who is also head of the house in Paris. He is a man of indefatigable industry, simple in habits, and proverbial as a pedestrian, one of his chief pleasures being a walk through the streets of Paris both before and after dinner. Baron Alphonse and Gustave and E. Rothschild each furnish a third of the capital. The registration of the deed of partnership cost $12,400.

COLONEL FORNEY, in the last number of *Progress*, has this paragraph: "I have just heard a good piece of news about my dear friend Jay Cooke, the philosopher, who, while as a marvellous leader as a banker, had to yield temporarily to misfortune, and to postpone the payment of his obligations. He is now on his financial feet again, and will soon be able to pay all his bebts. Considering that he went down in the crash of 1873, this is quick and honorable redemption."

"WHY are we brokers?" may be answered by the fact that the business is so remunerative that last week Mr. Metcalf, a partner of Mr. Ives, the president of the Stock Exchange, bought the seat of Mr. George Chapin for $20,500, and paid $1,000 admission fee to the Exchange in addition. The value of seats has of late appreciated more rapidly even than the price of stocks, for it is only a year or so since Mr. James Gordon Bennett paid out $10,000 for a seat, which he presented to his friend Mr. Lawrence R. Jerome. At the rate paid by Mr. Metcalf, the 1100 seats of the Exchange are worth about $22,000,000. One of its advantages is that at the death of a member his family or estate is entitled to $10,000.

THE new hotel of Baron Rothschild in Paris was formerly the property of the Marquis of Pontalba, who had repaired the fortunes of his family by marriage with a very rich creole of New Orleans. A capricious passionate woman, she led him a life which he patiently endured until she one day, in a pet, sneered at his poverty, and reminded him that the splendid mansion they occupied was hers. The Marquis said little, but presently with his children withdrew to a modest lodging, where they lived in the simplest manner on his own small means, in spite of the lady's entreaties for his return. The hotel was brought, stone by stone, from the Faubourg St Honore to its present site. It is a beautiful edifice. All the Rothschilds are invited to the house warming.

THE Princess of Wales, having visited Kensington Palace to advise on the fitting up of the apartments allotted to Princess Frederica of Hanover, was fascinated by Greuze's charming portrait of the Pompadour, who is depicted in a flowered silk dress, with lace fichu gathered up at the top of the bodice by a bow of ribbon, striped carmelite and white; upon her head is carelessly thrown a fanchon of lace, loosely fastened under the chin with a bow of the same striped ribbon. The whole toilet is as simple as possible, and in the most elegant taste. The Princess was immediately struck with the ease and grace of the coiffure, which, instead of depriving the countenance of all shadow, as is the case with the mob cap which has been the fashion so long, throws a shade becoming to every complexion over the face. The fanchon is consequently to become the fashion.

A Stalwart View of Art.

Scene—A room in a Highland mansion. Associate of the Royal Academy, arrived to paint portrait of a lady, encounters butler.

A. R. A. to butler—"Perhaps you will kindly give her ladyship my card, and ask her what hour will suit for sitting?"

Butler—"Sittin'! Good gracious! Her leddyship'll not set and watch you pentin'!"

A. R. A.—"My good man, I am going to paint a portrait."

Butler, pointing to a portrait—"What! Like these things on the wa'?"

A. R. A.—"Yes, just so."

Butler—"Weel, weel, that bates a'! I'm thinkin' a big strong man like you would be far better pentin' hooses."

THE British Geographical society is preparing for an Arctic expedition by way of Franz Josef land.

QUEBEC TIMBER TRADE.

The annnal trade circular, by Messrs. J. Be Forsyth & Co., has just been issued at Quebec. It says: We have again the pleasu of laying before the Trade our annual returns of Supply, Export and Stock winte ing at this Port with the usual comparativ statements, prices current, arrivals, &c., &c., all of which have been most carefully compiled.

Owing to the quantity of ice in the Gulf of St. Lawrence this spring vessels were detained in a most unusual manner, and few made their appearance before the end of May, when they commenced to arrive very freely; and notwithstanding the large number in port at the same time, they were as a rule loaded with dispatch. The arrivals of steamships exceeds those of previous years, and are more than double of what they were five years ago, being 261 steamers 492,670 tons this year, against 215 steamers 827,647 tons in 1879; in 1875 we find them to be 117 steamers 171,649 tons, and 89 steamers 113 287 tons in 1870. While this large increase in the carrying trade is done by steam, there is no diminution in sailing ships, 895 vessels 706,346 tons being entered against 666 vessels 492,670 tons last year. It will also be observed that 634 sailing vessels 553,45[illegible] tons cleared at this Port (lumber laden) this season.

When we penned our remarks just a year ago, we were able to state that a decided improvement had taken place in the Timber trade, and "with increased consumption and prices tending upwards in the British markets, we may look forward hopefully to the future." Happily, for all interested the expectations of the most sanguine have been fully realized; the manufacturers after contending with three years of great depression during which time they were often compelled to sell at less than the cost of production, have this year felt the benefit of prices which must have left very handsome returns, and were in many cases unprecedentedly high.

The trade of this port is in a sounder and more satisfactory state than it has been for years; the short supply of all woods this season, as will be noticed by glancing at the supply returns, as well as the full average export leaving us with exceedingly light stocks, the greater portion of which are held by the Shippers and which must suffice not only for the spring shipments, but also for part of the summer requirements.

WHITE PINE—*Square.*—The market opened last spring with prices in advance of what they had closed at the autumn previous, considerable number of old rafts changing hands at satisfactory rates; but with the arrival of fresh timber came a more decided improvement, and high figures were demanded and obtained during the remainder of the season. The maximum having been reached when some of the last transactions in choice wood took place. In examining the supply returns a discrepancy occurs which should be accounted for, the figures showing 4,244 285 feet measured, against 2,510,762 in 1879 yet we know the manufacture last winter was little over 2½ million feet. The facts are these, many rafts were laid up on their way to market in 1879, consequently were measured this season, while some lots of square and waney wintered over in the Coves unmeasured. The export is greatly in excess of that of either 1878 or 1879, and equal to the average of the past ten years, while the stock wintering is one-half of what it has usually been for the last twenty-five years.

In looking at the old circulars we cannot find any returns showing such a small quantity of white pine until we come to the year 1854 when square and waney in port measured 7,537,104 feet.

This stock on hand also contains about the usual proportion of common and inferior wood, suitable only for local requirements, for which there has been a steady demand all season, owing to harbour, railway and other works at present in course of construction, which demand is likely to increase if other contemplated improvements are carried out.

Concerning the manufacture this winter, it is impossible to write with any great certainty about it. On the Ottawa the "cut" will, it is stated, not exceed nine million feet of square and waney, even if it is all driven out of the small streams; while on the St. Lawrence and in Michigan, so much depends on the quantity of snow and its duration, that unless the hauling is favorable, a large proportion is liable to remain in the woods. In any case, the supply is not likely to exceed the average, and it must be borne in mind that the whole of last year's production has come to market, and apart from the small quantity wintering, we have to rely solely upon the new supply (always liable to be curtailed by a dry spring) for the shipments, not only of next summer and autumn, but also for the spring of 1882. We must also remind those of our readers who are not manufacturers, that the cost of producing this winter will be greater than last, owing to the enchanced rate of wages, &c.

WANEY has been in good request all season, the old lots finding purchasers at high rates. The stock now wintering is exceedingly light, barely sufficient for spring wants, and is chiefly held by the Shipping Houses. Lots to arrive early next season if not contracted for, must meet with ready sale. The great demand and high prices now paid for saw logs in Michigan and the West, may interfere materially with the production of Waney, and apart from the moderately small quantity making on the Ottawa, it is estimated that about 1½ to 1¾ millions may come from elsewhere.

		Supply.
1880	Square	4,244,285
	Waney	2,235,500
1879	Square	2,510,762
	Waney	1,599,635

Export.		Stock.
11,552,560	1880	6,197,318 Square. 797,346 Waney.
5,300,440	1879	12 139,523 Square. 2,217,888 Waney.

RED PINE.—Choice and good wood has been scarce and in request all season, the supply of this quality being limited as Lumbermen find difficulty in procuring it. The returns from the cullers' office show a good deal more than the manufacture of last winter from the same causes as those referred to in our remarks about white pine. The shipment has been nearly double that of 1879, and the stock wintering which comprises a large quantity of old and inferior wood is below the average of the past five years. The manufacture this spring will be light, and cannot arrive in time for spring requirements

	Supply.	Export.	Stock.
1880....	1,056,167..	1,433,200..	1,372,572
1879....	741,499..	813,800..	1,669,395

OAK.—This wood has felt the advance in prices as much as any and has been in request in season, especially good parcels. The production was moderate last winter, and notwithstanding that considerable remained behind at the rafting grounds from the previous years the receipts amount only to 1,790,230 feet. The export has run up to 2,316,840, leaving a stock on hand of 656,026 with which to commence shipment next season, a little over one-half of the quantity wintering last year and about one-third of the average of the past ten. This is the smallest stock we find recorded since 1863 when it was as low as 651,145 feet, and both scarce and dear the following spring.

	Supply.	Export.	Stock.
1880....	1,790,236...	2,316,840...	656,026
1879....	835,993..	1,681,000...	1,149,208

ELM.—The supply exceeds last year by almost 600,000 feet, the export has been very large and the stock wintering unusually light. Most of this has been "rock" of choice quality and has met with a ready sale, it is a difficult wood to procure, and the cost of standing timber is very high. The production for next season will be about an average one.

	Supply.	Export.	Stock.
1880.....	937,283..	1,041,800...	237,610
1879.....	336,461..	544,040..	331,536

ASH.—The receipts show an improvement, and the demand for fresh wood being active, it has been in good request all season. Many old lots have been moved off, and the stock wintering is unusually light.

	Supply.	Export.	Stock.
1880.....	245,480...	293,500..	136,319
1879.....	17,161...	172,480...	265,840

BIRCH.—This is about the only wood which was too heavily produced last winter and which has been difficult of sale all season. Owing to the very light stock in 1879, and high prices then ruling, many were induced to go into manufacturing this wood, but in the face of a heavy stock wintering and slight demand, operations will be greatly curtailed this winter.

	Supply.	Export.	Stock.
1880.....	574,314..	558,840..	176,693
1879....	121,095..	196,480...	31,629

TAMARAC.—This wood enters so little into consumption, that we must recommend our friends to discontinue the manufacture of it at present. Altho' very valuable for ship-building purposes, it has never been largely exported, and with the decline in ship-building its requirements cease. Should the ship-building trade with France revive, and which is much to be desired, this wood will again come into request.

	Supply.	Export.	Stock.
1880....	30,889...	Nil. ..	112,991
1879.....	6,691..	" ..	85,727

STAVES.—Both Standard and Puncheon have been in good demand, and very scarce during the latter part of the season. Our stave trade has dwindled down from a once large and prosperous business, which it was some twenty years ago, and has passed to a great extent into the hands of the Americans. In 1863, 2,211 M. of Pipe, and 3,564 M. of Puncheon, were shipped from this Port. Prices are exceedingly high as will be seen by referring to our prices current, the stock wintering the lightest on record.

		Supply.	Export.	Stock
1880	PIPE	196..	392..	206
	W. I.....	488..	921..	271
1879	PIPE	180...	660..	405
	W. I.....	169..	843..	770

DEALS.—*Pine.*—The supply and export show a wonderful increase in this branch of the Lumber trade, and when we take into consideration the fact that Deals shipped from the District of Montreal are not included in these returns, we have to admit that this branch of the lumber business is considerably on the increase. It is estimated that only about 45,000 to 50,000 Deals, included in our supply came from Michigan, the remainder being of Canadian manufacture. Deals have been in good demand all season, the heavy shipments in June and July causing them to be at one time very scarce. Prices have been good, and the large sales made to London firms some weeks ago stiffened the market, notwithstanding the rather unfavourable accounts from Great Britain. We do not believe the supply next year can much exceed that of 1880, while the cost of procuring logs will be greater, especially in the Province of Quebec, owing to the higher Government dues to be exacted.

The stock wintering in this market is unusually light, and has not been as low since 1872.

	Supply.	Export.	Stock.
1880....	5,320,000...	5,823,263..	1,626,158
1879.....	3,007,573...	4,202,219..	2,223,406

SPRUCE.—Have also been in good demand and shipped in large quantities. The dry spring and summer keeping back the logs, and causing exceptionally high prices to be paid. The stock wintering is light.

	Supply.	Export.	Stock.
1880.....	3,500,000..	3,200,130..	515,110
1879.....	2,474,865..	2,852,500...	682 634

FREIGHTS opened at 26s. Timber and 67s. 6d. Deals to Liverpool, 67s. 6d. Deals, and 27s. Timber to London, 25s. Timber and 65s. Deals to Clyde, closing at 30s. Timber, 75s. Deals to Liverpool, 70s. Deals to London, and 28s. Timber and 72s. 6d. Deals to Clyde.

LIST OF "COVES" AND OWNERS.

The following is a list of the various "Coves" where the stock on hand mentioned above is wintered. The names of the owners are also given, viz:—

Jacques Cartier Mills—E. L. Sewell.
Alexandria—J. Bell Forsyth & Co.
Cap Rouge—P. &. W. Comy.
Dalhousie—Forsyth & Dalkin.
Victoria—M. Rockett.
Ring's End—E. H. Jackson.
New London—O'Connell & Co.
Union—M. Stevenson & Co.
Sillery—R. R. Dobell & Co.
Do Safety & Bridgewater.
Do Sharples, Bros. & Co.
Do James Bowen.
Pointe a Pizeau—R. R. Dobell & Co.
St. Michael's—Cook Bros. & Co.
Woodfield Harbour—S. Connolly.
Spencer—Knight Bros. & Co.
Wolfe's—John Roche.
Cape and L'Ance des Meres—George Robinson.
J. H. Clint's.
Stadacona—J. & W. D. Brown.
St. Charles—John Home.
New Waterford—A. F. A. Knight & Co.
Montmorency Mills—G. B. Hall & Co.
St. Nicholas Mills—W. G. Ross & Son.
Chaudiere Basin—J. Breakey.
North Liverpool—Ritchie Bros.
Do Benson Bros.
Do Hamilton Bros.
Etchemin—H. Atkinson & Co.
Hadlow West—G. B. Symes Young.
Mill Cove—S. J. Bennett.
Hadlow—Price Bros. &. Co.
St. Lawrence—W. Dock & W. Co.
Windsor—G. B. Symes Young.
South Quebec—Warehouse Co.
Indian Cove—A. Gilmour & Co.
Do James Patton & Co.
Do J. MacLaren & Co.

Crooked Lake.

The Port Hope *Guide's* correspondent, writing from Crooked Lake says:—"Since my last, everything has being going on as usual; trees falling before the woodman's axe and teams continuing to haul them to the brink of the lake.

LUMBERING.

With regard to lumbering, you will please allow me to say a few words to lumbermen in general. There are two points in which they make a great mistake; first in setting wages equal, notwithstanding the difference in men. Now, from former experience, I contend that they lose thereby. Place three choppers in a gang, two are excellent choppers, the third an indifferent or worthless one; those two soon become weary of aiding him to complete a day's work, and will naturally conclude that they will do no more than he, as they receive no more wages. Secondly, stinting men to ascertain the number of logs per day; by so doing they lose in this wise—men will call and leave timber behind in order to fill their counts. Men should have a foreman competent to judge of a day's work for a gang, let the timber be what it will. Such foreman ought to be one of experience, who has filled the place of chopper, sawyer, skidder, loader and teamster. From such experience, if a small count is given at night, he next day, by going over the ground, could judge whether work was done or not. Men should be paid according to their work. I have seen both methods tried, and must say my plan proved the best for the lumberer. If any one can prove to the contrary, I am ready to hear him.

The Chicago Lumber Trade.

Chicago lumber traffic shows less increase over 1879 than might have been expected, considering the general activity in business in the North-West and the large immigration. The receipts are nearly all by water, so that they are now nearly complete for the year. There have been 1,518,863 thousand feet, against 1,408,739 last year, an increase of 109,624 thousand, or 7¾ per cent. The receipts in 1879 showed a large increase over several previous years, however, and this year's receipts are the largest ever known. The shipments down to the end of November were reported at 752,054 thousand this year, against 691,767—an increase of 8.7 per cent. The shipments are nearly all by rail, and these will continue till the end of the year, though not at a very rapid rate, as the lumber cannot very well be used this season. At Albany, the great lumber market of the East, the receipts for the season are reported at 361,598 thousand, less than one-fourth of the Chicago receipts. The shipments from the Saginaw lumber district (which mostly go south and east) were 769,573 thousand, and 90,000 or 18 per cent more than last year. One reason why the Chicago shipments have not grown more probably is that an unusually large part of the immigration this year, and of the demand for lumber, has been in Western Minnesota and Dakota, which get comparatively little lumber from Chicago, but have nearer sources of supply at the mills above St. Paul and in Wisconsin east and north-east of St. Paul.

LARGE TIMBER OPERATIONS.—The Hamilton *Times* says that Mr. M. F. Vansickle, of the township of Ancaster, has now three gangs of men making timber, and intends taking out 60,000 cubic feet this winter for the Quebec market.

Miramichi Lumber Trade.

J. B. Snowball, Esq. of Chatham, Miramichi, has issued his annual wood trade circular, dated, Chatham, Dec. 1st. 1880, in which he says, the season just closed, has been an exceptional one, The winter was fine for lumbering operations, but having less snow than usual and light spring rains, nearly a quarter of the season's drive was stuck in the brooks. Great efforts were made through the season to get these logs out, but the greater portion of them were only got to market about 1st November, and the cost of driving at that time had reached fully two dollars per thousand superficial feet.

Our river was clear of ice on the 26th April, but as the Gulf was blocked with drift ice, we had but one arrival from sea before 21st May. On that day eight vessels arrived; on the following day 28 arrived, and by the 3rd of June 125 lumber-carrying vessels were in port. This number was rather beyond our wharfage capacity and caused considerable inconvenience and annoyance to shippers.

The stock of sawn woods on hand at this time last year was heavy, but the improvement in the European as well as our own markets during the year stimulated shipments and the yards here are now almost bare.

The season of 1881 must commence with an entirely new stock, the volume of which will depend largely on the character of the winter for lumbering operations.

A lower rate of freight prevailed during the year than ship-owners at first expected, the early chartering from 65/ to 67/6, the summer rates from 60/ to 62/6 and the fall again advancing to 65/. These rates average about 5/ higher than those of the year previous.

The total stock, round and sawn, wintered last year on the Miramichi was 70,000,000 superficial feet. The stocks held over this season are as follows:

9,000,000 superficial feet of Merchantable Spruce Deals.
2,000,000 " " " Pine Deals.
5,000,000 Scantling 4ths and Ends.

16,000,000

and 9,000,000 s. f. of saw logs, one half of which are yet in the brooks or sorting booms.

The shipments of the last four years were as follows:

1877—150 Million superficial feet.
1878—106 " " "
1879—114 " " "
1880—155 " " "

The shippers from the Port of Miramichi are—

	No. of vessels.	Tons.	Deals, etc., s. ft.
J. B. Snowball	74	38,104	32,607,972
R. A. & J. Stewart	74	38,765	33,172,260
Guy, Bevan & Co.	66	33,747	27,578,133
W. Muirhead	31	15,675	13,843,910
D & J. Ritchie & Co.	33	15,496	14,630,576
A Morrison	27	12,649	11,208,912
Geo. McLeod	21	10,635	9,596,894
Geo Burchill	12	6,522	5,791,000
R. Hutchison	10	6,670	6,049,192
C. F. Todd	1	617	525,710
Totals	349	178,871	155,004,559

To this should be added 4,651,703 palings; 211,500 laths; 20,500 tons birch and 12,56 tons pine.

A well informed correspondent calculates that 150 million superficial feet of saw logs this winter on the Miramichi and its numerous tributaries.

Mr. Snowball's circular gives shipments from St. John:—vessels 338; tonnage 259,944; deals, &c. s. f. 215,485,000; Birch, 16 035 tons, and pine 2441 tons.

The shipments from Dalhousie are given:—vessels, 43; tonnage, 21, 639; Deals, &c., 15,262,845; palings, 39,305; birch, 3,661 tons; pine, 910 tons; Spruce, 1,364 tons; birch plank, 191,892 s. f.

From Bathurst the shipments for 1880 were:—vessels, 33; tonnage, 15,230; deals, scantling, &c., 12,125,946; palings, 812,302 pieces; pine, 80 tons.

From Richibucto (including Buctouche and Cocagne):—vessels 56; tonnage, 23,217; deals, &c., 21,372,346; palings, 41,200 pieces; birch, 355 tons.

From Caraquet:—27 vessels; tonnage, 12,199; deals &c., 10,917,080.

From Sackville:—10 vessels; tonnage, 3,925; deals 4,037009, s. ft, and 53,500 pieces palings.

St. John (N. B.) Lumber Exports.

The St. John *Globe* says, on Dec. 1st. last year we pointed out that as the result of the stagnation in the lumber trade in Europe the exports had fallen off 44,000,000 feet as compared with the same period in 1878,—that is the first eleven months of the year. To day, we are able to show that in consequence of the improved condition of the wood trade, which showed itself early in the year, the shipments have largely increased over the exports of the last few years, and rumour credits the shippers, especially those who held over stocks, with having made a great deal of money. The total shipments so far this year amount to 205,831,000 feet, compared with 142,694,000 feet in the first eleven months 1879, and 186,073,794 in the eleven months of 1878.

Mr. Gibson, as usual, leads the list of the shippers, furnishing more than one-third of the exports. The statement for 1880 is as follows:—

Shippers.	No. of Vessels.	Tons.	Deals. s. ft.
A Gibson	94	86,303	75,355,000
Carvill, McKean & Co.	55	33,523	29,358,000
R A & J Stewart	74	52,683	49,778,000
Guy, Bevan & Co	49	33,976	30,418,000
W M Mack	20	21,955	14,648,000
S Schofield	13	7,308	6,163,000
McLachlin & Wilson.	3	2,248	1,068,000
Sundry Shippers	18	9,711	8,053 000
Total	326	249,702	205,831,000

For 1879 the figures are:

Shippers.	No. of Vessels.	Tons.	Deals. s. ft.
A Gibson	28	31,614	29,233,461
Carvill, McKean & Co.	44	27,887	39,919,056
R A & J Stewart	57	41,056	35,986,999
Guy, Bevan, & Co.	27	16,298	14,931,419
Wm M McKay	28	31,728	33,460,318
S Schofield	13	5,837	5,175,707
McLachlan & Wilson.	4	3,165	1,283,324
Sundry Shippers	14	9,080	7,703,900
Total	215	166,655	142,694,179

The exports of timber largely increased this year. In 1878 the birch sent forward amounted to 8,354 tons, and the pine 2,021; 1879, 10,682 tons of birch and 2,616 tons of pine were sent forward; this year birch exports amounted to 16,035 tons and pine 2,441 tons.

At the present time, the wood market is in a favourable state. The shipments for the remainder of the year will be light. A season of great activity is expected next year, and very extensive preparations are being made for it. An immense quantity of lumber will be got out on the St. John and its tributaries, and in other parts of the Province as well, and we can only hope the operators and speculators will not overdo the business.

Montreal Lumber Shipping.

During the past season thirty-seven cargoes of lumber, amounting to 19,784,855 feet, has been cleared through the Montreal Custom House to ports in the United Kingdom. The Montreal Export Lumber Co. publish a statement of lumber shipped from the St. Lawrence to the River Plate this season, which shows a total of 10,286,184 feet, of which they were the principal shippers.

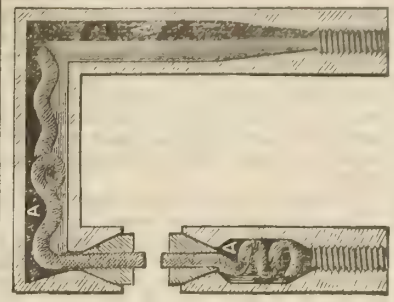
PREVIOUS SHIPMENTS.

1879	12,476,150 feet.
1878	10,855,246 "
1877	8,787,928 "
1876	3,437,000 "
1875	10,123,000 "
1874	16,262,293 "
1873	36,073,919 "
1872	28 234,908 "
1871	16,005,935 "
1870	25,145,183 "

CORRECTION. — In the description of Messrs. Bronson and Weston's mills at the Chaudiere, the average amount cut annually should have read:—"About 200,000 logs, producing between 35 and 40 million feet of timber, of which from 10 to 15 million feet are always kept on hand." The eagle eye of the proof reader and the "bodkin" of the intelligent compositor permitted a number of glaring typographical errors to appear in last number of the LUMBERMAN.

New Saw Guide.

The following illustration of G. W. Rodebaugh's patent ready adjusting, self oiling saw guide, which has lately been introduced amongst saw mill men will explain its proper form.



It has given excellent satisfaction where used. The guide arms are hollow, and as shown in the cut, are provided with two oil chambers, into which the guide pins are inserted, made of leather firmly fastened together, 1¼ inches thick, (square), and are perforated to enable a wick which is inserted to feed the oil gradually. This is a positive self-oiler by capillary attraction; cannot waste a drop of oil, for there is nothing to draw the oil out of the chamber when the saw stops, or when the saw is oiled on the pin friction-surface. Those guides are strong and durably built from experience, and warranted in every particular.

They can be readily adjusted when desired by the sawyer when the saw is in the log, without endangering hand or limb, and will stay where you leave them.

These saw guides will be furnished to responsible mill owners on 10 or 15 days' trial free of charge, and if not satisfactory after trial, can be returned free of charge. Manufactured by Kerr Brothers, Walkervill, Ont. (see advt.)

The Michigan Lumber Trade.

THE ENORMOUS CUT IN MANISTEE. — NEW MILLS.

From the *Manistee Independent*, we learn that the increase in the lumbering and milling industry in that important section of the Michigan lumbering district during the current year has been somewhat enormous. The new shingle-mills of Davis & Blacker, R. G. Peters, John F. Brown & Co., and the addition to Mr. Canfield's shingle-mill will cut a total next year of 165,000,000 shingles, which, added to this year's cut of 435,000,000, will make a total of about 600,000,000, as the shingle cut for Manistee. The new saw-mills of John F. Brown & Co. and R. G. Peters will make a total season's cut of nearly 30,000,000 feet of lumber, which, added to this season's cut of 215,000,000 feet, will make about 245,000,000 feet as the total cut of lumber for next season.

Of the six or eight large new mills now in course of erection at Manistee, the *Independent* furnishes the following dimensions and interesting details of the two largest:—

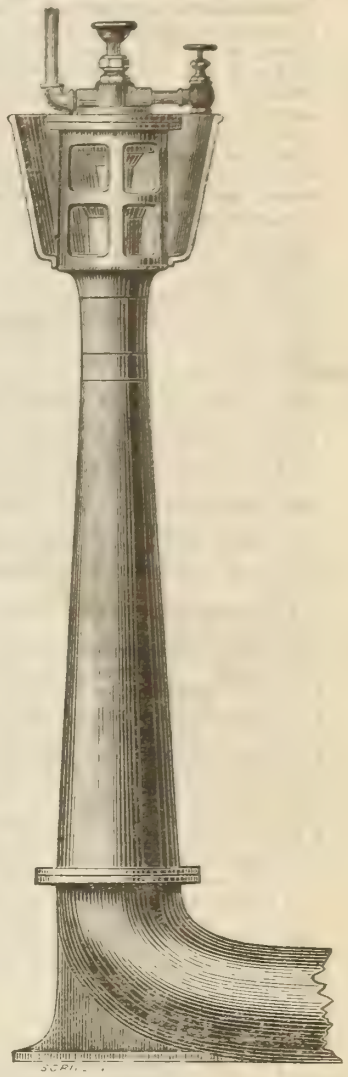
"The new mill of John F. Brown & Co., occupies one of the very finest sites imaginable. The main of the mill is 30x160 feet, with a west wing for a shingle-mill of 30x50 feet and an east wing for boiler and engine house, 40x52 feet. In the saw-mill there will be one circular saw, and edger and a bolting saw for blocks. The carriages and circular rigs will be of the latest improved Alliance patterns. The capacity will be about 65,000 feet of lumber per day. The shingle-mill will have one double-block Challoner and one hand-machine, which will give it a capacity of 150,000 shingles per day. The steam will be furnished by four large boilers, and the power by a 22x28 engine. Everything about the mill will be of the latest improved machinery, and it will be one of the most complete mills in the city. The mill is built from designs by Mr. John A. Jamieson, who gives his personal supervision to the work. Mr. Jamieson is one of the proprietors as well.

"R. G. Peters' new mill is rapidly approaching completion. The main is 40x123 feet, with a west wing of 30x75 feet for a shingle-mill, and an east wing of 42x50 feet for the engine and boiler house. There will be one circular-sew, edger and trimmer, and and a siding-machine in the saw-mill. The capacity will be about 80,000 feet of lumber per day. The shingle mill will have three double-block Challoner machines and a stealer, giving a capacity of 300,000 shingles per day. There will also be a lath mill. This mill is also built from designs furnished by Mr. Jamieson, and will be complete in every appointment."

Mr. Jamieson is an old Quebecer, being a native of the adjoining county of Quebec.

New Steam Blast.

The Steam Blast, illustrated by the sub' joined engraving, is known as "Killey's Patent Steam Apparatus, and is a very effective aid to steam power for burning, hard and soft coal screenings, hard coal, inferior coal of every description, inferior and wet wood, tan bark, pine and oak sawdust, in fact any kind of inferior fuel.



This apparatus is attached to the boiler, and feeds the draft through the grating underneath the furnace, The heat of the gases of combustion is fully utilized, while the smoke is completely consumed. No driving machinery is required, and no attention is needed except to regulate the quantity of steam, of which very little is used. A saving of 60 per cent of fuel is claimed, and the fire bars last much longer than with the ordinary draft. The apparatus is manufactured by J. H. Killey & Co., Hamilton, Ont., who will supply circulars &c., on application.

Three sizes are manufactured, and either can be attached to any boiler.

The Coming Stock of Logs.

The *Mississippi Lumberman* says of the coming stock of logs:—"It is a low estimate to say that the prospective cut is 25 per cent larger than that of 1879-80. The rivers cannot increase their output very much, because the driving capacity of most of the smaller streams have been taxed for some years past, as well as the handling capacity of the booms, but the chief increase will be from the railway mills, which are multiplying wonderfully in the States of Winconsin and Minnesota. We venture to predict that there will be over 200,000,000 feet more produced by the railway mills in these States in 1881 than during the past year. The bulk of this will come down from new mills."

"The Neighbour's Bairn."

(By Henry Irving, in "the Green Room.")

When, a year ago, we produced at the Lyceum, as a first piece, the old Scotch drama of "Cramond Brig," the various members of the company playing in the piece had full choice of wherewithal to wash down their "heed and harrigles"—(of which, by-the-way, over a hundred were consumed during the run)—and the miller's supper became a nightly jollity, except, perhaps, to the Scotch nobility and the king's huntsmen, who, with watery mouths and eager eyes, crowded the wings, forbidden by the irony of dramatic fate to enter upon the scene until the supper had been cleared away.

This piece had reminded me of an incident which came under my notice a good many years ago. In the off season of a large provincial theatre, in which I was a stock actor, I took an engagement at a small town, then known as one of the most thriving seaports of the North. The salary was little; the parts were long, and there was not much opportunity for gaining renown. However, it was better than remaining idle, as, at the worst, the amount of debt to be accumulated was minimised. The manager was not a bad fellow, and having been a good actor in his time, was only too glad to be surrounded by a class of actors whose services he could only obtain by the opportunity afforded by the bright summer—in those palmy days the darkest and wintriest season to the airy comedian or the thoroughly legitimate tragedian. Our opening bill consisted of "Cramond Brig," "Lord Darnley," "Wallace, the hero of Scotland," and "Gilderoy, the Bonnie Boy," in all of which I played, besides contributing my share in the National Anthem, which was right loyally and loudly sung by the entire strength of the company. After the rehearsal of "Cramond Brig," our jolly manager said, "Now, boys, I shall stand a real supper to-night; no pasteboard and parsley, but a real sheep's head, and a little drop of real Scotch." A tumult of applause.

The manager was as good as his word, for at night there was a real head well equipped with turnips and carrots, and the "drop of real Scotch." The "neighbour's bairn," an important character in the scene, came in and took her seat as usual beside the miller's chair. She was a pretty, sad-eyed, intelligent child of some nine years old. In the course of the meal, when Jack Howison was freely passing the whisky, she leaned over to him and said, "Please, will you give me a little?" He looked surprised. She was so earnest in her request that I whispered to her, "To-morrow, perhaps, if you want it very much, you shall have a thimbleful."

To-morrow night came, and, to my amusement, she produced from the pocket of her little plaid frock a bright piece of brass, and held it out to me.

I said, "What's this?"

"A thimble, sir."

"But what am I to do with it?"

"You said that you would give me a thimbleful of whisky if I wanted it, and I do want it."

This was said so naturally that the audience laughed and applauded. I looked over to the miller, and found him with the butt end of his knife and fork on the table, and his eyes wide open, gazing at us in astonishment. However, we were both experienced enough to pass off this unrehearsed effect as a part of the piece. I filled the thimble, and the child took it back carefully to her little "creepy" stool beside the miller. I watched her, and presently saw her turn her back to the audience and pour it into a little halfpenny tin snuff-box. She covered the box with a bit of paper, and screwed on the lid, thus mrking the box pretty water-tight, and put it into her pocket.

When the curtain fell, our manager came forward and patted the child's head. "Why, my little girl," said he, "you are quite a genius. Your gag is the best thing in the piece. We must have it in every night. But, my child, you mustn't drink the whisky! No, no! that would never do."

"Oh, sir, indeed I won't; I give you my word I won't!" she said, quite earnestly, and ran to her dressing-room.

"Cramond Brig" had an unprecedented run of six nights, and the little lady always got her thimbleful of whisky, and her round of applause. And each time I noticed that she corked up the lormer safely in the snuff-box. I was curious as to what she could possibly want with the spirit, and who she was, and where she came from. I asked her, but she seemed so unwilling to tell, and turned so red, that I did not press her; but I found out that it was the old story—no mother, and a drunken father.

Still, it was strange; what could she want with the whisky—a child like her? It could not be for the drunken father. I was completely at fault. I took a fancy to the little thing, and wished to fathom her secret, for a secret I felt sure there was. After the performance, I saw my little lady come out. Poor little child! there was no mother or brother to see her to her home. She hurried up the street, and turning into the poorest quarter of the town, entered the common stair of a tumble-down old house. I followed, feeling my way as best I could. She went up and up, till in the very top flat she entered a little room. A handful of fire glimmering in the grate revealed a sickly boy, some two years her junior, who crawled towards her from where he was lying before the fire.

"Cissy, I'm glad you're home," he said. "I thought you'd never come."

She put her arms round him, laid the poor little head on her thin shoulder, and took him over to the fire again, trying to comfort him as she went.

"Is the pain very bad to-night, Willie?"

"Yes." A sadder "yes" I never heard

"Willie, I wish I could bear the pain for you."

"It's cruel of father to send me out in the wet; he knows how bad I am."

"Hush! Willie, hush! he might hear you."

"I don't care! I don't care! I wish he would kill me at once."

The reckless abandon of the child's despair was dreadful.

"Hush! hush! he is our father, and we must'nt say such things!" This through her fast-falling tears. Then she said, "Let me try and make the pain better."

The boy took off his shirt.

The girl leaned over and put her arm round him, and kissed the shoulder; she then put her hand into her pocket and took out the snuff-box.

"Oh, Willie, I wish we had more, so that it might cure the pain."

Having lighted a dip candle, she rubbed the child's rheumatic shoulder with the few drops of spirit, and then covered up the little thin body, and, sitting before the fire, took the boy's head on her knee, and began to sing him to sleep.

I took another look into the room, through the half-open door; my foot creaked; the frightened eyes met mine. I put my finger on my lips and crept away.

But, as I began to descend the stair, I met a drunken man ascending—slipping and stumbling as he came. He slipped and stumbled by me, and entered the room. I followed to the landing unnoticed, and stood in the dark shadow of the half-open door

A hoarse, brutal voice growled, "What are you doing there?—get up!"

"I can't, father; Willie's head is on my knees."

"Get up!"

She gently laid the boy's head on the floor, pillowed it in her little shawl, and stood up.

"Father, Willie is very sick! you ought to try and get him cured."

"Shut up. If I hear another word, I'll make you and him too keep yourselves quiet." And the brute flung himself on his bed, muttering to himself in his drunken semi-oblivion, "Cure him, indeed! Not if I know it. That's not the way to get the money; his cough is worth a lot alone. Cure him, indeed! Not likely!"

The black-hearted scoundrel!

The girl bowed her head lower and lower.

I could not bear it. I entered the room. The brute was on the bed already in his besotted sleep. The child stole up to me, and in a half-frightened whisper said, "Oh, sir, oughtn't people to keep secrets if they know them? I think they ought, if they are other people's." This with the dignity of a queen.

I could not gainsay her; so I said, as gravely as I could, to the little woman, "The secret shall be kept, but you must ask me if you want anything." She bent over, suddenly kissed my hand, and I went down the stair.

The next night she was shy in coming for the whisky, and I took care that she had good measure.

The last night of our long run of six nights she looked more happy than I had ever seen her. When she came for the whisky she held out the thimble, and whispered to me, with her poor, pale lips trembling, "You need only pretend to-night."

"Why?" I whispered.

"Because he doesn't want it now. He's dead!"

SOME of the most timid girls are not frightened by a loud bang.

Died Like a Gentleman.

A KENTUCKY LAWYER'S IDEA OF SELF-MURDER WITH PROPRIETY, AND HOW HE REALIZED IT.

Hayden H. Shouse recently said, while talking with a friend about a man who had blown his brains out, "It was a dirty thing to do. Nobody has a right to make a mess of himself in that manner. There are 600 different ways of committing suicide in a gentlemanly way. Shooting and cutting are disgusting, and no man of sensibility and taste would disfigure himself. Opium offers the best means of suicide, and if ever I conclude to go, I'll take it. A man can go to sleep like a gentleman and wake up at his destination. There is no blood, no horror." Mr. Shouse was noted for being singularly handsome. His face, when he was younger, had been described as Raphael-like, and a maturity of heavy eating and drinking had not robbed him of his beauty. He was a lawyer residing at Henderson, but his reputation and practice extended all over Kentucky. He was a candidate for the Congressional nomination in the Second district last fall.

Recently Mr. Shouse turned from a table on which he was writing in a public room of the Louisville Hotel and read to a perfect stranger in the room a letter that he had written. It was a request that the person to whom it was addressed would receive his body and bury it, and it enjoined a quick transportation, so that the remains might not suffer injury on the way. The lawyer's manner was distraught, and the listener, seeming him a lunatic, walked away, without regarding the matter as of any importance.

The matter was soon afterward related to the hotel clerk, who knew that Mr. Shouse had been drinking heavily, and feared that the letter had been written in earnest. He and a physician went to the lawyer's room and found him dying neatly in bed from opium. Everything possible was done to save his life, though he protested against the rude treatment, and he died.

Just after his death came this despatch from his father-in-law:

ETANSVILLE, Ind., Dec. 1.

Phil. Judge, Louisville Hotel:

Hayden Shouse is a noble soul. If he is not dead, tell him to live for Vancie and Mollie. A thousand friends will sustain him. If he is dead, comply with his request, and send bill to me.

S. B. VANCE.

"Vancie" is Mr. Shouse's baby and "Mollie" his widow.

Mr. Shouse made his mortuary preparations with a degree of tranquil forethought which seems somewhat remarkable. Two weeks ago he left his home at Henderson, spent a night at Evansville, and came to Louisville. He had been drinking, and continued until he made himself sick, when he had a doctor and got better. He gambled recklessly for several days, and appears to have lost about $3,000. The day before his death he paid up insurance policies on his life to the amount of $8,000. Later he went to an express office, put about $60 in money, some private papers, and his watch in a small box, directed it to his wife, paid the charges and took a receipt. Then it seems he went to his hotel and wrote and read aloud the letter before alluded to. This crowding of a personal matter upon the attention of an utter stranger showed a lack of gentlemanlike reserve so foreign to Mr. Shouse's character as to seem to his friends evidence of insanity. When he had finished the letter, it appears that he went to his room, took a bath, put on fresh linen, and, having fixed himself as nicely as he could for the trip he had in prospect, he took the laudanum and got into bed.

It is said that he was delicate in appearance, but of an iron will; that he was addicted at times to the intemperate use of liquor; that he had a remarkable sense of humour, and could be sarcastic when he chose.

On the night he died one of his friends said: "If Shouse could see these people trying to resuscitate him, he would be the maddest man in the State."

When he was first found in bed an emetic was brought to him, and he was asked to take it, but he said, "No, I won't; I didn't take poison for that purpose."

No satisfactory reason is given for Mr. Shouse's action. "Self-Help," by Samuel Smiles, was not found among his effects. It is said that his gambling losses were no large enough to have caused fatal uneasiness. But his health was shattered and he feared consumption; and, although he had a wife and child, it seemed advisable to him not to live, and he got away as narrated.

How to Act in Case of Fire.

American Builder.)

Better than all the elaborate and costly apparatus for extinguishing fires are constant care and watchfulness, and quick and intelligent action on the part of those who first discover a fire in progress. The fire which at its beginning could be smothered with a pocket-handkerchief, or dashed out with a bucket of water, neglected a few hours, lays in waste millions of dollars worth of property. If there is any time in which a person should be cool and calm, in perfect command of himself, it is when he discovers a fire that threatens the destruction of life and property. The first thing to do is to learn precisely where it is; the second, to consider the chances of extinguishing it. Of course, in cities, an alarm should at once be sent out, but at the same time a vigorous effort should be made to put out the fire with the means at hand; for sometimes what the fire engine is unable to accomplish when it reaches the scene, can be done by one or two persons who act promptly before the flames have had time to gain headway.

First, then, do not be alarmed on account of smoke. Frequently there is a great deal of smoke before the fire has made much progress. Remember that one can pass through smoke by keeping his head near the floor, or by enveloping it in a wet woollen cloth. On entering a room to fight down a fire single handed, keep the door closed behind, if possible. A pail of water and a tin dipper, in the hand of a resolute person, can be made to work a miracle at the beginning. If the fire has progressed too far to admit of this course, and it is necessary to depend entirely on outside help, then see to it that every door and window is closed. By so doing, where there is a fire engine in the neighbourhood, it will often be possible to confine the fire to one room.

Every person who stops at a hotel should take special pains before retiring to note the location of the stairways, so that in case of an alarm he can find his way out, even though the halls are filled with smoke. Never leave a room when there is an alarm of fire without first securing a wet towel, or, if possible, a wet sponge or piece of woollen cloth, through which to breathe. If escape by the stairs is cut off, seek an outside window and stay there till help comes. Above all things be cool and have your wits about you. When a lady's dress takes fire, let her fall on the floor at once and call for help, in the meantime reaching for some rug or woollen cloth, with which to smother the flames. There is nothing new in this advice. It has been repeated in one form or another hundreds of times; but it will bear repeating thousands of times.

The Coming Year.

There are a number of curious things with regard to the figures and their relations in the year 1881. From right to left and from left to right it reads the same. This will not happen again for a long time to come—just how long we will leave for the reader to determine. The first two figures of 1881, divided by 2, give 9, and the last two figures, divided by 9, give 9 also. If the figures of the year be divided by 9, the quotient will contain a 9, and if multiplied by 9, the product will contain two 9's. If the first and figures be added together, the product is 9, and if the last two figures be added, the sum is 9 also. If the first two figures be placed under the last two, and added, the sum will be 99, and 18 is 2-9 of 81. By adding, dividing, and multiplying, nineteen 9's are produced, or one 9 for each year required to complete the 19th century. The year that is before us is certainly peculiar in a figurative sense. What else this coming year, that will soon be upon us, may bring can be better told upon the morning of Jan. 1, 1882, when it will give place to its successor.

Capt. O. A. Horne's construction party at Arlington, Ga., went into their tent at night and were greeted by the rattling of a dozen or more snakes. The cook found one in his bed waiting company. Capt. Horne had his men fall into line, each one armed with a stout fence rail, and marched to a more agreeable place for the balance of the term.

India Rubber and Where it Comes From.

The following description of the India rubber tree, and of the manufacture of India rubber was written by Col. A. R. Perria Labra, an enterprising merchant of the Rio Purua and also a member of the house of deputies of the province of Amazones, who has published it in pamphlet form and was condensed by a correspondent of the Boston *Journal*, from which paper we copy it :

The "Seringneria" is a tall, perpendicular tree with little foliage, growing and thriving on low land in a dense forest of perpetual verdure. It attains a height of from 20 to 40 metres and a diameter of about one metre, but generally less. The leaf at a distance looks like that of the "Moniva" on account of its length, division and colour. It falls during the month of September, the summer season, but after 15 days the tree is clothed with new foliage. The seed is very similar to that of the "Mamona," but is smaller and contains oil of the same nature. The sap of the tree is as white as, and of about the consistency of, very rich milk or very poor cream, and from this is prepared (by and of the smoke of burning "dococo' kdried palm nut an elastic substance well "nown throughout Europe and America as in India rubber," but called here "Borracha" (a leathern bottle) on account of the form it takes as prepared for market.) An infinity of uses and application for this material and the products of its manufacture gives a rich and valuable return to the producer, and a constantly increasing demand and to sustain these high prices ruling in the principal markets of Europe and America as well as at Para. Its extraction and preparation may be considered even to-day a new industry, as well as an inexhaustible source of wealth. The rivers Madeira, Juvua, Xingua and Purus, as well as other affluents of the Amazon, have been already explored and worked to advantage. The Purus, to the distance of 800 leagues, with its many lakes and tributaries, produces this tree abundantly, and its forests have already been explored for the distance of 900 miles. Each labourer, man or woman, no matter which, can collect daily from 11 to 13 pounds of fine rubber, worth 62 cents per pound, and there are some who extract from 17 to 22 pounds. The average production is about 100 pounds to each person, but there are men who have made double that amount during the season. The danger of destruction to this fountain of wealth exists in the ignorance and recklessness of the workmen, who often kill the tree by careless and neglectful tapping. Their employers take no pains to prevent this, as they pay nothing for the land or the trees.

At the beginning of the summer the labourers commence to locate themselves among the seringas. Here on the Purus this period is from the last of April until January, but the best time is from May until September, when the tree sheds its leaves. After the new foliage starts, the milk contains much water, and the rubber, in relation to the quantity of milk, is diminished two-thirds of its ordinary weight. In preparation for, and to facilitate, the collection of the milk the labourers make through the woods a path called "estrada," or a street, to the foot of each seringa tree, until they reach 80 to 120 trees, clearing away all bushes and other obstructions around each. This is done with a large American knife, but a bush scythe would be better. Having completed this work the laborer places at the foot of each tree the little cups for collecting the milk called "tigelinkas" distributing usually from three to eight to each tree, according to its size, until 500 to 700 "tigelinkas" have been disposed of. He then makes six or more slashes in the bark with a large knife so that the sap will flow. Some waste several days in this preparation, which being completed on the following morning very early they commence the extraction and collection of the milk. Between the hours of five and six the workman goes out on his path with a machiduha, (a very large knife) a mass of damp and plastic clay of the consistency of putty, and a vessel or bucket in which to collect and convey the milk to the smoker. Passing round the tree he makes with his knife oblique and downward slashes from the corners of the horizontal ones made before, like the letter V, to lead the sap into the cup, which he fixes at the point of junction with a little of his wet clay, continuing the same operations with each tree on his path until he reaches the last. He then immediately and very quickly returns to the first, where, with his bucket on his arm he proceeds to empty into it the "tigelinkas" which are filled with milk, leaving them at the foot of the tree or hanging to a neighbouring one, until he has collected the milk from all the trees, having done this he conveys it in haste to the smoker, who converts it into rubber and then empties his bucket into a large zinc or earthern basin.

In a large earthern pot without a bottom is kindled with the nut of the palm tree a fire, which makes a dense smoke that ascends through the neck of the pot. The smoker has a wooden mold with a long handle, shaped like a paddle, over which he pours with a gourd a quantity of milk and then passes it over the smoke, which it rapidly hardens, leaving on the mold a filament the thickness of a sheet of paper. He continues to repeat this process until he has used up all the milk in the basin, which takes about two hours, more or less, according to the quantity. The next day he makes a cut round the blade of the paddle by which he withdraws it, putting the rubber in the sun to dry. When it is well smoked it is of a dull yellow color, and when badly smoked a dirty white. Nevertheless, in the course of time both become black. Through remaining too long in the smoke, or through the negligence or want of activity in the smoker, the milk coagulates before it is thoroughly smoked, and this causes the difference in the quality in the rubber as clasisified, "fina, entre fin, and sernamby." The "fina" is made from the milk in perfect condition, the "entre fina" when it is saturated and begins to coagulate, and the "sernamby" when the milk coagulates naturally, or there has fallen into it some extraneous substances, such as water, bark and pieces of rubber, or on account of the uncleanness of the vessels in which it is collected. All the milk that remains in the cups after emptying, or that runs down the sides of the trees, coagulates and makes "sernamby" only two-thirds the value of "fina." This work is repeated day after day, the gashes that are made in the trees at the distance of one decimetre from the ground are repeated one over the other, as high as a man can reach, and the cups are raised successively round the trees and each change is called by the workmen, "reacao." This is usually the work of one week. The patus or estrados, will not last over three months of steady working ; therefore it is necessary for the rubber gatherer to prepare two for the season. Some make four. Here on the Purus, of which I have been specially speaking, they always use two or more.

A Horse's Revenge.

Horses are not usually vindictive or revengeful, but leave their wrongs to be redressed by the Society for the Protection of Animals. Occasionally, however, they take upon themselves to punish those who ill-treat them, as is shown by the following incident, which was witnessed lately in the streets of Paris : A carter driving a heavily-laden vehicle through a narrow street contrived, through his own awkwardness, to entangle the animal's legs in the shafts of the cart. Instead of endeavouring to liberate his horse he commenced striking it brutally on the nose and head, and continued doing so during during some minutes, notwithstanding the indignant remonstrances of the lookerson. At first the poor beast bore patiently these unmerited blows, but after a while, maddened by the pain it suffered it retaliated by seizing the man's right arm between its teeth, lacerating the flesh and breaking the bone in three different places. The spectators who interfered at this juncture and tried to force the animal to let go its hold were not touched by the horse, but it resolutely refused for some time to relax its grip upon the carter's arm, and when at length the man was removed to a little distance it endeavoured perseveringly to get at him again. The injuries received were so serious as to necessitate the immediate amputation of the lacerated limb, and the patient lies at the hospital in a critical condition. Wanton ill-usage of animals is, however, so cowardly an offense that one can hardly feel much sympathy for the sufferer.

GARIBALDI left his peaceful home, notwithstanding his severe prostration, and went to Milan, receiving an extraordinary ovation there, in order to gratify his wife, who was determined to have him appear with her in the town where she was formerly a humble peasant woman.

A WOMAN accidently went to church with two bonnets on her head—one stuck inside the other—and the other women in the congregation almost died of envy They thought it was a new kind of bonnet, and too sweet for anything.

Sawdust as Bedding.

A correspondent of the *American Agriculturist* writes : We have tried for two years dry sawdust in the cow's stable, and on the whole like it better than any bedding we have ever tried. It makes a more comfortable bed, completely absorbs the urine, and the cow is kept clean with less labour than when any other is used. The objection to salt-marsh sods, dried, or to headlands and dry muck is, that they soil the cow and make it necessary to wash the bag before milking. Straw, of all sorts, soon becomes foul, and without more care than the average hired man is likely to bestow, soils the cow's bag also. Dry sawdust is clean, and makes a soft, spongy bed, and is an excellent absorbent. The bag is kept clean with the aid of a coarse brush without washing. A charge of 15 bushels in a common box-stall, or cow stable will last a month, if the manure, dropped upon the surface is removed daily. The porous nature of the material admits of perfect drainage, and of rapid evaporation of the liquid part of the manure. The sawdust is not so perfect an absorbent of ammonia as muck, but it is a much better one than straw, that needs to be dried daily in the sun and wind to keep it in comfortable condition for the animals. In the vicinity of saw and shingle mills, and of the ship yards, the sawdust accumulates rapidly, and it is a troublesome waste that mill owners are glad to get rid of. It can be had for the carting. But even where it is sold at one or two cents a bushel, a common price, it makes a very cheap and substantial bedding. The saturated sawdust makes an excellent manure, and is so fine that it can be used to advantage in drills. It is valuable to loosen compact clay soils, and will help to maintain moisture on thin sandy and gravelly soils. There is a choice in the variety of sawdust for manure, but not much for bedding. The hardwoods make a much better fertilizer than the resinous timber. To keep a milch cow in clean, comfortable condition, we have not found its equal.

A Profitable Traffic.

(From the London Telegraph.)

An entirely new branch of industrial business in connection with the still thriving trade in relics of cannonized ecclesiastical notabilities has recently been developed by the monks of Mount Athos, who annually dispatch a large number of reverend travellers in this particular class of commodity to the Russian Government of Orenburg. A lively and chronic demand for relics appears to obtain among the inhabitants of this province, and the latest expedient for keeping up the necessary supply adopted by the priestly purveyors does infinite credit to their ingenuity. Having provided themselves before starting on their rounds with a few good solid bones of departed saints, duly authenticated by some exalted episcopal or monastic authority, they proceed to saw up this stock into extremely thin slices. Each slice is then framed and glazed, in the manner of a miniature portrait, and either exhibited to the credulous peasantry for a moderate fee, or parted with altogether at a heavy figure to some devout capitalist whose means permit him to become the absolute possesser of so precious an object. About six weeks ago a party of these sagacious Sawbones set up a booth in the portico of Orsk Cathedral, and have since done uncommonly well, according to the Cologne Gazette, in framed fragments of wonder-working tibia and femora, once doubtless, used for locomotive purposes by saints and martyrs of indisputable merit. But the astute relic-retailers, in view of the hardness of the times just now in Russia, have supplemented their special trade by large dealings in blessed balsams, sanctified salves, and miraculous mixtures, which are eagerly bought up at top prices by infirm and sickly believers. It is estimated that within the last six years the monks of Mount Athos have realized 2,000,000 roubles—about £300 000—clear profit, by their sales in Russia alone.

A LADY in the New Haven Hospital, who had been taking morphia in order to get sleep, for many nights was given a bottle labelled "sleeping drops," but filled only with water. She complained that the medicine was rather strong and braced her head, and after the dose was reduced slept comfortably every night for a month.

PRINCE RUDOLF of Austria, after an old family custom, has sent flowers to the Princess Stephanie every morning since their betrothal, no matter where she may have been staying or travelling.

FACTS AND INCIDENTS.

IT was calculated in England some time ago that not one book in 1,840 goes through a second edition, and not one in many thousands a third.

THE Government of Italy pays only $12,000,000 yearly for pensions, despite two or three wars and revolutions and the pensioning of civil officials.

MRS. YOAKAM, of Coos River, Oregon, carries on a farm with the help of one hired man, and she and her daughter last season aid down sixteen hundred pounds of butter.

THE three Roman Catholic churches of Toronto have gone into the risky business of conducting savings banks. These are small institutions, however, and are intended to encourage little hoards. The banks are open only on Saturday evenings, and the total amount on deposit is about $15,000.

A GERMAN named Rubner has been making some interesting experiments to determine what proportions of the several ingredients of various foods are absorbed in the body. It was found that with carrots and potatoes no less than 39 per cent. passed through the body, leaving 61 per cent. to be retained. It was proved that far more of flesh is retained than of any other food.

THE public receipts of the Japanese empire for the year ending June 30, 1880, were about $55,000,000. The expenditure was equal to the income. The public debt is $250,000,000, but very nearly four-fifths of it partakes of the character of terminable annuities. The interest and the debt average 6 per cent., whereas the ordinary rates of interest in Japan range from 4 per cent. to 9 per cent., and the Chinese government had to pay 8 per cent. on its last loan.

SIR E. J. REED, Naval Constructor, writes that the Livadia, 335 by 153, at her very first trials, and under some temporary disadvantages, attained a speed of nearly sixteen knots an hour. On her way to Spain the weather showed signs of becoming very rough soon after they left Brest, but the Grand Duke Constantine, Lord High Admiral of Russia, refused to put back considering the opportunity an excellent one for testing the vessel. "We consequently steamed away into the very teeth of the Bay of Biscay gale, which gradually grew angrier, and the following morning blew at its wildest. Her steadiness was most remarkable. The confidence of the Duke, in refusing to turn back, was justified, and both Admiral Sir Houston Stewart, the Comptroller of the Navy, who was on board and myself are indebted to his Royal Highness for a most instructive sea experience." The damage done to her was by wreckage.

Ireland is still Ireland, and the social storm still pipes higher and higher. In spite of all that is said, those who live will see that the union will not be repealed, and that landlords will not be abolished. Peace will be brought back, if force is necessary, with the strong hand, and there will be very thorough changes in the land laws, and something like equity and reasonableness brought to hold sway in the relations of landlord and tenant. And whether or not the House of Lords throw out such remedial measures they are bound to pass, and the more they are opposed the more thorough and far-reaching they will eventually be made. Aye, and the changes won't be confined to Ireland. The land question booms largely up in England and Scotland also, and before all the play is played out there will be changes effected which will fill some with horror, but a great many more with gladness and gratitude. A man that lets out the use of a certain raw material called land, has a right to his rent and to the land back again, but not to all the improvements the tenant has made on it by his skill and capital. These in justice belong to the man who put them there, and the way landlords have for generations coolly taken possession of them, as if it were all right, is just as disgusting as it is monstrous. In fact, the relations between landlord and tenant even in Canada, need a good deal of straightening up, for they are generally of a very jug-handled description—all being in favour of the stronger party. What sense is there in all that power of summarily seizing all that may be on the premises for rent? Why should the landlord have precedence over every other creditor? Indeed a good many other "why's" might be put in this connection not easily answered, except that the landlords have had the greatest say in making the law, and have generally taken good care of themselves and their class interests.

THE CANADA LUMBERMAN

HAND MILLERS', MANUFACTURERS', AND MINERS' GAZETTE.

ISSUED SEMI-MONTHLY AT TORONTO, ONT.

A. BEGG, Proprietor and Editor.

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TORONTO, ONT., DECEMBER 31, 1880.

NEW YEAR—1881.—To the readers of the LUMBERMAN, one and all, we wish a Happy New Year, with many returns of the season.

THE CENSUS.—The Census for the Dominion is to be taken on the 4th of April.

PARLIAMENT.—The Dominion Parliament, which adjourned over the Christmas holidays, will meet on the 4th of January.

DEFERRED NOTES.—During the latter part of this month we have made several journeys amongst our patrons, and have taken copious notes, which will be extended for next issue.

THE SNOW.—At Bracebridge the depth of snow is about twenty inches. Towards Rosseau it increases to two feet. Nearer Parry Sound the depth decreases to about 18 inches. Around by McKellar, Spence, and Ryerson, the depth is two feet, but at Lake Nipissing there is only about one foot deep. Very litttle frost in the swamps.

MUSKOKA AND PARRY SOUND.—Logging operations and the getting out of square timber in the Muskoka and Parry Sound Districts are progressing vigorously. The men are in excellent spirits. Few accidents have occurred so far, this season. The epizootic, which broke out among the horses at the shanties, is decreasing, and teams are able to do their full work. Cutting is about over in some of the camps. The cut of the season will be given as fully as possible next issue.

IMPORTANT DECISION.—The case of McLaren *vs.* Caldwell came to a close at Perth on the 15th inst., after occupying 11 days. The question to be decided was whether the Mississippi river and two of its tributaries, viz., Buckshot Creek and Louise Creek, were floatable in a state of nature, and if not, whether the defendant had any right to float logs or timber down the stream without the consent of the plaintiff, who had gone to a very large expense in erecting dams and slides. Judgement for Mr. McLaren, on the ground that before the improvements were made the stream was not floatable.

OTTAWA SQUARE TIMBER,

The names of Messrs. G. & A. Grier, of Kippewa, should have been inserted in the list published on the 15th inst., of square pine to be got out this winter on the Upper Ottawa, for 120,000 feet; also Capt. Young, of Temiscamanque, for 150,000 feet. Mr. Letour is likely to get out 600,000 feet, which with other additions, on account of favourable weather, will bring up the whole quantity of square timber on the Ottawa and tributaries to at least 10,000,000 cubic feet this season.

OUR QUEBEC LETTER.

THE STOCKS WINTERING IN QUEBEC—MESSRS. FORSYTH'S ANNUAL TRADE CIRCULAR—SPRUCE LOGS—MINING NEWS.

QUEBEC, December 24th.

The various lumbermen doing business here have made up the annual returns of timber actually wintering in their coves. The details will be found in the annual trade circular of Messrs. J. Bell Forsyth & Co., which has already been sent to the LUMBERMAN. The circular has just made its appearance, and as usual has been in large demand. Its statistics of the year's business, and comparative statements must have been prepared at a large expense of time and labor, and are very valuable. The estimates which it forms of next year's business, and of the probable cut of the present winter, agree precisely with the calculations contained in some of my previous letters.

Great activity is reigning this season in the shanties of Beauce, where very large quantities of spruce logs are being taken out for next year's cutting.

THE GOLD MINES OF BEAUCE.

Public attention having been directed very much of late to the gold regions of the Chaudiere valley, a hasty resume of what has been done towards developing the resources of the district may not be uninteresting. For many years past it has been known that rich veins of gold existed on the rivers Gilbert, Des Plantes, Du Loup, La Famine and State Creek. Important works were undertaken on most of these locations in 1864, 1865, 1866 and 1867. Amongst others, Messrs. Bertrand, Poulin, Douglass, McRae, Nash and Lockwood on the Gilbert, and Mr. Oley on the Du Loup, retired with large profits. Mr. McRae, it is reported having realized $15,000 in six months. Since the difficulties between the miners and the De Lery Co. set in with reference to mining rights, but little has been done on the Chaudiere. In 1876, however, a company of miners, the Messrs. St. Ouge, made amicable arrangements with the De Lery people and with Mr. Lockwood, and commenced to work the diggings on the River Gilbert. The books of the company show that up to this year they have taken out gold to the value of $705,540, but that out of this large amount they have obtained a net revenue of $18,682 only. The profits realized would, of course, have been very much larger, but for the unscientific method in which its works have been conducted. The management of the industry has been excessively extravagant, and the manner of the washing for gold very defective. Since the St. Ouge Company reopened the works on the Gilbert, several other individuals and companies have followed in the steps, amongst whom is an English company of capitalists, known as the Canada Gold Mining Co., and having at its head a gentleman of experience in Mr. J. N. Gordon. It is impossible to ascertain exactly the results of this company's operations. The President is not very ready to give information on this head, but is very much interested in the effort now being made at Ottawa, to have the Mining Act adopted at the last session of the Quebec Legislature, declared *ultra vires*. Mr. Gordon's pretension is that the legislation in question throws open to the public the rights which legally belong to his company, and which were purchased by them from the De Lery Co, to whom they were granted by patent from the Crown. The company employs about 100 men, and there are not wanting those who allege that its average find of gold is 10 ounces daily. This may be an exaggerated estimate, but it emanates from a practical miner. The Dinsworth Co. of New York employs 60 men and takes out an average of seven ounces per day. Mr. Bread employs 30 men and takes out about four ounces a day. Some distance to the right of where these companies operate, there is another stream called La Branche, a tributary of the Gilbert, upon which new works have been opened up, the principal parties interested in them being Messrs. De Lery, Chapman, Augers, Mathieu, Berube and Rodrigue. Thes works promise well. So do others, opened on the Du Loup river by Mr. Humphreys, representing Hon. Mr. Moreton, of the staff of His Excellency the Governor General. On the river Harbottle, Messrs. Beemer and Richards have discovered a vein which justifies very high expectations. On the Des Plantes, Mr. Mackenzie has commenced the washing of the bed of the river by hydraulic power, and the results obtained have been very satisfactory. On the same river, very good results are being obtained by another company, at the head of which are Messrs. Matthieu, Gonreau and Berube.

It appears that all is not gold that glitters. I have already reported seemingly very large finds of the precious metal on Mr. Ainsworth's lot, No. 13, Gilbert River, Beauce. It appears, however, that the cost of working this land is unusually heavy, and to this may perhaps be due the institution of actions at law for labor on the works during the past summer.

STADACONA.

PRESERVATION OF OUR FORESTS.

TO THE EDITOR OF THE LUMBERMAN.

SIR—I have just, for the first time, had a look through a number of the LUMBERMAN, and I must congratulate you on its appearance, and in the manner, in general, in which it is got up. The object it has in view is a very good one, and there is not the least doubt but those in whose interest it is published will value it for the information it contains. The want of such a journal has long been felt by the lumber trade and those connected with it, now since you have made such a very creditable commencement, I trust the enterprise will be liberally encouraged and your expectations fully realized.

I notice an article on the necessity of preserving shade trees—another on tree planting and tree culture—reference to shantymen's wages, the markets, and a general view of the trade. One of the most important of the above is the giving of correct market prices in the places mentioned, so that the trade in Canada can with confidence point to the LUMBERMAN as the proper authority.

How to preserve our forests, and how to renew them is certainly a most important subject for us in Canada. The renewing of the forests is a question that should occupy the attention of our local legislature at an early day. I see that the Kansas State legislature has taken steps in that direction. An Act has been passed enacting that any person who is the head of a family or who shall have arrived at the age of 21 years, and is a citizen of the United States, or who shall have filled his declaration of intention to become such, who shall plant, protect and keep in a healthy, growing condition for eight years, forty acres of timber, the trees thereon not being more than twelve feet apart each way on any quarter section of public lands of the State, shall at the expiration of eight years, be entitled to said lands, free from all State charges. If a person makes a purchase of 40 acres and plants ten acres, he will be entitled to the number of acres so planted—free.

Now, Mr. Editor, you will see the advisability of some such step being taken to start a system of keeping up our forests, when we have so much waste land, that some day should prove a mine of wealth to the country. In looking over the report of the progress of the State of Minnesota, I notice that in 1878 the State Legislature allowed for trees planted on the highways, $30,000; and I also find that in France alone in 1877, no less than 37 million feet of lumber was converted into toys. Under such immense consumption of timber in one country of the old world, how much greater the necessity for us to protect and renew our valuable but rapidly decreasing forests. I have extended this article rather larger than I intended, but if you consider it of sufficient importance, in my next I will give you my views on how to preserve our forests from fire, in the Free Grant Lands of Ontario and Quebec. Wishing you much success, I remain &c.,

A WATCHMAN ON THE TOWER.

Dec. 19th, 1880.

The Lion's Tongue.

(Land and Water.)

The very peculiar formation of the lion's tongue did not escape the notice of our anatomist, but he does not say much about it. I have now in my hand the dried tongue of a lion; it is covered with sharp-pointed horny papillæ, set very thickly upon its surface. The papillæ on the front portion of the tongue are much larger than those in the rear part of the tongue, but the smaller ones are set much closer together than those in front. Each papillæ consists of a horny spine, the point of which is curved and set directly backward, reminding me much of the spines on the tail of the thornback ray. On applying this lion's tounge to the cheek, I find that the roughness is so great that with a little pressure a wound might easily be made in the skin. The use of this is to scrape off the meat from the bones of the animals, for the lion is not a great bone-eater—he leaves the bones for the hyenas to crack, these animals having teeth especially constructed for the cracking of bones. This peculiar roughness of the tongue is also present, but in a less degree, in the common cat, and it can be seen when the cat is lapping milk, but still better if the tongue of a defunct specimen be taken out, put for a while in spirits, and then pinned out tight on a board. This rough tongue is of great importance to the health of the lion.

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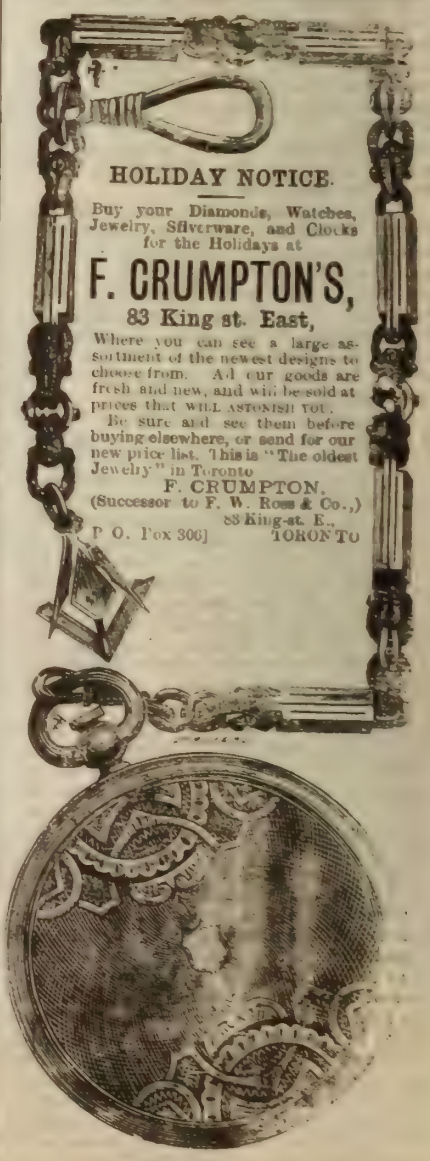

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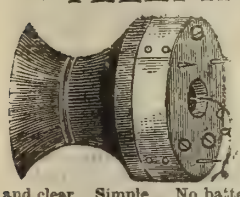

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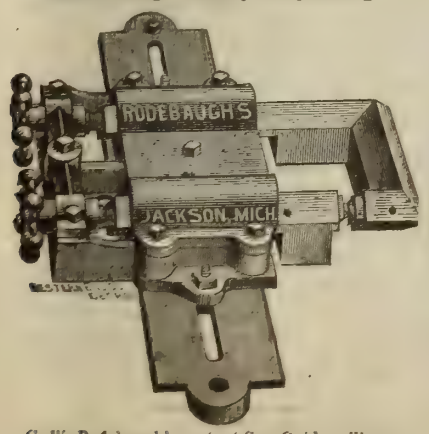

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NOTICE.

Monday, the twenty-fourth of January next, will be the last day for receiving Petitions for Private Bills.

Monday, the thirty-first of January next, will the last day for introducing Private Bills to the House.

Friday, the eleventh of February next, will be the last day for presenting Reports of Committees relative to Private Bills.

CHARLES T. GILMOUR,
Clerk of the Legislative Assembly.

Toronto, December 6th, 1880.

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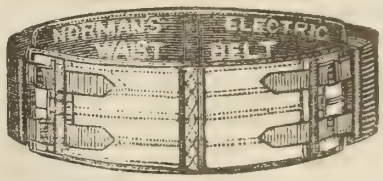

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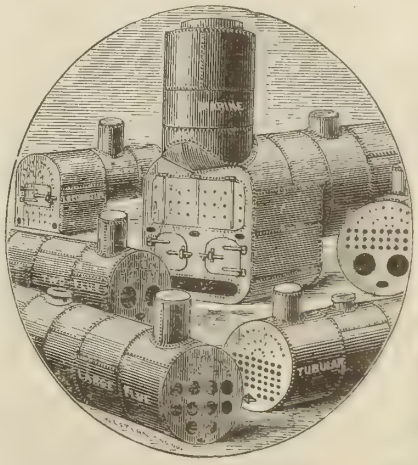

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The Walkerville Foundry,

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Walkerville, Ont., Dec., 1880.

The Largest Oak in Great Britain.

In spite of a rival claim put forward in behalf of an oak in Newland in Gloucestershire, I believe that the largest oak in Britain—and our island home can boast of not a few giant oaks, many of them famous, too, for their historical associations—stands in the parish of Cowthorpe, three miles from Wetherby, in the west riding of the county of York. The Cowthorpe oak, whose age has been computed to exceed 1,500 years, has, as may be supposed from its extraordinary size, been noted in numerous works devoted to natural history and forestry. The circumference of its trunk close to the ground was, at the close of the last century, according to Evelyn's "Sylvia," 78 feet. Shortly after the publication of this work, earth was placed around the base of the trunk with a view to the preservatien of the trees, which by covering over some very considerable projections, reduced the girth of the stem at the ground line to 60 feet. In 1829, the Rev. Dr. Jessop measured the tree and communicated its dimensions to Strutt's "Sylvia Britanica." We transcribe the reverend doctor's details, which, he assures us, may be relied upon :

Circumference at the ground, 60 feet ; circumference at the height of one yard, 45 feet ; height of the tree in 1829, 45 feet ; extent of the principal remaining limb, 40 feet ; greatest circumference of ditto, eight feet.

Dr. Jessop adds : "The tree is hollow throughout to the top, and the groundplot inside (the amount of which has been much exaggerated) may possibly afford standing room for forty men." In Loudon's "Arboretum" the diameter of the hollow within the tree, close to the ground, is given as nine feet, ten inches. "The circle occupied by the Cowthorpe oak," says Professor Burnnet, "where the bottom of its trunk meets the earth, exceeds the ground-plot of that majestic column of which an oak is confessed to have been the prototype, namely, Smeaton's Eddystone Lighthouse." In Burnett's "Outlines of Botany" we also read: "So capacious is the hollow of the Cowthorpe oak that upwards of seventy persons have been, as the villagers affirm, at one time assembled in it." In the 12th volume of Loudon's Gardener's Magazine, the Cowthorpe oak is said to be undoubtedly the largest tree at present in England. Shaw, in his "Nature Displayed," says : "Many suppose the Cowthorpe oak to be the father of the forest ;" and in Kent's "Sylvan Sketches" (1825) mention is made of this oak as surpassing all others.

Tradition asserts that at one time the branches of this tree overshadowed half an acre of ground. A large branch which fell about the commencement of last century is said to have extended to a wall 90 feet from the trunk of the oak. On this wall, which still remains, the villagers, so the story runs, used to mount to pick the acorns from the overhanging branches. The leading or top branch fell before the date of any record concerning the tree. The manner in which it is said to have fallen is, however, remarkable. The main trunk having become hollow, the perpendicular shaft dropped down into the trunk and could never be removed. There it remained wedged in, doubtless tending to strengthen the hollow cylinder and prevent compression from the pressure of its enormous branches. In 1772 one of the side branches was thrown down in a violent gale of wind, and on being accurately measured was found to contain upwards of five tons of wood. The largest of the living branches at present extends over 40 feet north northeast from the trunk. This giant limb is supported by a substantial prop of timber.

A century ago Yorkshire children used to amuse themselves with a game called the "Dusty Miller." The Cowthorpe oak was a meeting place for this diversion. Through the rents in the shell of the trunk, then only large enough to admit them, troops of merry village lads and lasses crept into the interior, and, provided with a spout, which was balanced in a hole in the wall of their living playhouse, they gathered the dry, crumbling dust and fragments of wood and shot them down the spout to their companions outside. It has been reported that for some time the cavity within the tree was used as stabling for cattle, but this, we think, is fiction. The openings in the trunk, though evidently enlarging constantly, are even now scarcely wide enough to give color to this assertion.

In connection with this tree, an anecdote is related of that notable Yorkshireman, John Metcalfe, the blind highway contractor and surveyor, better known as "Blind Jack" of Knaresborough. Blind Jack was a frequent visitor to the tree, and would measure its girth correctly at any height within his reach, going round it with his long arms extended. He used to point out, too, with accuracy, by putting up his staff, to the exact spot from which the great branch had fallen. Whenever he came, an old bloodhound which was kept near the tree, whose wont was to snarl at every stranger, fondled him and licked his hand. Blind Jack now lies at rest in Spofforth churchyard, almost within the sight of the old oak.

So great was the fame of the Cowthorpe oak that formerly small saplings raised from its acorns were sold in pots to visitors by the villagers for as much as a guinea each. As the old oak now stands, it is a very picturesque object. It is situated in the centre of a small green paddock ; hard by is the little village church, a very ancient structure, and the clear waters of the winding Nidd glide noiselessly past. The battered trunk, annually crowned with green foliage, is grand in its venerable decay. The old tree has been termed "the glory of England and the pride of Yorkshire ;" and its enormous size, the growth of many centuries, entitles it to all the fame it has acquired.

Paper from Grass.

It has been discovered that any of th common grasses make a superior article, and a patent has been issued to the discoverer. The following is the process :

"The manufacture of paper pulp and paper from paper grass is one of the novelties for which a patent has been obtained. Any of the common grasses found in the field, lawn, or meadows, may be used, and it is said that the green grass pulp produced from them make a paper of great strength and length of fibre, and possesses tenacity, softness and flexibility ; and further, that this paper is even softer and more transparent than that made of linen. An advantage not to be overlooked is the one of economy, since one square foot gives in the whole year, 0.9 to 1.0 of a pound of green grass, making from 30,492 to 66,340 pounds to an acre. One pound of green grass makes one fourth to one-sixth of a pound of fine, bleached, finished paper, or 3,711 pounds of finished paper to the acre.

"So long as the sap is in circulation and the chlorophyl, silica, and other inorganic matters are not dried in, in which event the fibre is seriously impaired for the purpose of paper, either old or young grass may be used, but to avoid danger, it is best to have the grass cut or mown before it begins to bloom.

"The first process of manufacture is to pass the grass between the rollers of the press, which crushes or loosens the fibre and squeezes out most of the sap. It is then freed from dirt by being thoroughly agitated or washed by other means in a large tank of water, in temperature either warm or cold. A perforated false bottom in the tank contains the grass and allows the dirt to fall into the compartment below, where a pipe gives egress to the dirt and wash water. After sufficient washing the crushed grass is boiled in an open kettle, or in a steam kettle with lye, in a proportion of a pound of caustic soda, or two tenths of a pound of caustic potash, or six-tenths of lime. to 100 pounds of grass. With an open kettle the boiling is continued from four to five hours ; with a steam kettle two hours will suffice.

"From the kettle the material goes into a filtering trough of magnesia for about thirty minutes, then is placed a second time in the solution of sulphuric acid. These operations may be repeated more or less, till the pulp is as fine and white as required, after which it is washed in clear water."

Another method is to filter the crushed pulp with water glass, and bleach it with a solution of chloride of lime or chloride of soda. Still another is to bleach the crude pulp in chlorine gas, and finish with waterglass, after which the pulp is washed with clean water.

As we were talking one day about churches and their curious ceremonies, a little boy remarked that he had seen a christening, a funeral, and a wedding, but he had never seen a divorce.

MR. LONGFELLOW can take a worthless sheet of paper and by writing a poem on it make it worth $50. That's genuis. Mr. Vanderbilt can write fewer words on a similar a sheet and make it worth $50,000,000. That's capital.

A Great Invention.

A man living near Bloomfield, N. J., has contrived an arrangement, says the New York *Sun*, by the use of which he is enabled to get an hour or more of extra sleep in the morning, and in other ways he finds it of great benefit. In many ways it takes the place of a domestic servant. The gentleman has thought out and put into practical working an idea that occurred to him a year ago. He is awakened in the morning by a shrill whistle. He at once gets out of bed, for he knows what that whistle means. It tells him that all is ready for him to get breakfast. He dresses and goes into the kitchen, and there he finds a bright, fresh fire, a tea kettle full of boiling water, and other conveniences for preparing his morning meal. All this is accomplished by means of an alarm-clock with weights, a piece of wire, a sheet of sandpaper, and some matches. Paper, wood, and coal are put into the grate of his cooking-stove, and a tea kettle filled with water, and having a tiny whistle fitted into the nozzle of the kettle, is placed on the stove. By setting the alarm in the clock he can have a fire at any time he wishes. When the alarm in the clock goes off, a weight falls and hits the wire ; the wire moves and scrapes the matches fastened to it on the sandpaper ; the matches light the paper in the stove, the paper fires the wood and coal, and soon a fire is under way. In a little while the water in the teakettle boils, and then the tiny whistle gives the note of warning that everything is ready and it is time to get up.

"Simple thing, and yet what a comfort it is," the inventor says. "There is no getting up for me now an hour before breakfast, losing that amount of sleep, and then waiting around for breakfast. The arrangement costs next to nothing, and it is as trustworthy as anything in this world. I have not had it patented yet. Some persons advise me to, and perhaps I may. I haven't any for sale ; get it up entirely for my own comfort and convenience, and it has more than repaid me already. But just think, if it were in general use it would save many hard words and do away with considerable domestic unhappiness among poor people. Doubtless it might have a tendency to make a better feeling between some men and their wives, by settling the vexing question as to who should get up in the morning and build the fire. Out of this question alone many divorce suits grow, and this arrangement would prevent them."

One Hundred Bushels of Shelled Corn to the Acre.

Mr. Nathan G. Pierce tells the *American Cultivator* how he raised 100 bushels of shelled corn to the acre, having accomplished that feat for the second time this year. He uses for seed an eight-rowed corn which he has improved by careful selection, and believes it to be a good variety to raise in that locality, or, in fact, anywhere between Virginia and the Canada line, or east of the Alleghany Mountains.

The ground selected for planting was a good piece of gravelly loam. It was well ploughed last spring, about the first of May, harrowed, treated to a broadcast application of 900 pounds fertilizer to the acre ; again harrowed faithfully, rendering the land fine and mellow ; rows marked three feet apart, a small amount of fertilizer scattered to each row. May 10th, three kernels of corn planted in each hill, two feet apart in the rows ; cultivated and hoed four times, allowing no weeds to grow ; passed through the entire piece, cutting each hill down to two stalks ; every sucker in each hill cut throughout the field.

During the entire period of growth through the season the field was closely watched, every weed pulled and every ear of smut cut out. At the proper time, after the corn has become hard, it was cut, bound in bundles, and stooked. When dry it was drawn into the barn, where, with the assistance of a hired man, the corn was husked, weighed as husked, and found to yield 100 bushels to the acre, allowing seventy-five pounds of ears to equal one bushel of shelled corn.

GOLDWIN SMITH, in the five years of his Oxford University course, won the Hertford, the Ireland, a first in "Greats," the Latin verse, the Latin essay, the English essay, and to crown all, a fellowship of the University. He remained an Oxford man for twenty years, and in 1858 was made by Earl Derby Regius Professor of ModernHistory, with a salary of £650 a year.

Some Strangely Fulfilled Dreams.

Dickens once had a dream which was fulfilled, at least to his own satisfcation. "Here," he wrote on May 30, 1863, "is a curious case at first hand. On Thursday night last week, being at the office here," in London, "I dreamed that I saw a lady in a red shawl with her back toward me, whom I supposed to be E. On her turning round I found that I didn't know her, and she said, 'I am Miss Napier.' All the time I was dressing next morning I thought, 'What a preposterous thing to have so very distinct a dream about nothing?' And why Miss Napier? for I never heard of any Miss Napier. That same Friday night I read. After the reading came into my retiring-room Mary Boyle and her brother, and the lady in the red shawl, whom they presented as 'Miss Napier" These are all the circumstances exactly told." This was probably a case of unconscious cerebration. Dickens had no doubt really seen the lady, and been told that she was Miss Napier, when his attention was occupied with other matters. There would be nothing unusual in his dreaming about a person whom he had thus seen without noticing. Of course it was an old coincidence that the lady of whom he had thus dreamed should be introdnced to him soon after—possibly the very day after. But such coincidences are not infrequent. To suppose that Dickens had been specially warned in a dream about so unimportant a matter as his introduction to Miss Napier would be absurd ; for, fulfilled or unfulfilled, the dream was, as Dickens himself described it, a very distinct dream about nothing. Far different in this respect was the strange dream which President Lincoln had the night before he was shot. If the story was truly told by Mr. Stanton to Dickens, the case is one of the most curious on record. Dickens teld it thus in a letter to John Foster : "On the afternoon of the day on which the President was shot there was a Cabinet council, at which he presided. Mr. Stanton, being at the time Commander-in-Chief of the Northern troops that were concentrated about here, arrived rather late. Indeed, they were waiting for him, and on his entering the room the President broke off in something he was saying, and remarked, 'Let us proceed to business, gentlemen.' Mr. Stanton then noticed with surprise that the President sat with an air of dignity in his chair, instead of lolling about in the most ungainly attitudes, as his invariable custom was; and that instead of telling irrelevant and questionable stories, he was grave and calm, and quite a different man. Mr. Stanton, on leaving the council with the Attorney-General, said to him, "That is the most satisfactory Cabinet meeting I have attended for many a long day. What an extraordinary change in Mr. Lincoln !" The Attorney-General replied, 'We all saw it before you came in. While we were waiting for you, he said, with his chin down on his breast, "Gentlemen, something very extraordinary is going to happen, and that very soon."' To which the Attorney-General had observed, 'something good, Sir, I hope?' when the President answered very gravely, 'I don't know—I don't know. But it will happen, and shortly, too.' As they were all impressed by his manner, the Attorney-General took him up again. 'Have you received any information, Sir, not yet disclosed to us?' 'No,' answered the President, 'But I have had a dream. And I have now had the same dream three times. Once on the night preceeding the battle of Bull's Run. Once on the night preceding such another,' (naming a battle also not favorable to the North.) His chin sank on his breast again, and he sat reflecting. 'Might one ask the nature of this dream, Sir?' said the Attorney-General. 'Well,' replied the President without lifting his head or changing his attitude, 'I am on a great broad rolling river—and I am in a boat—and I drift ! and I drift !—but this is not business,'—suddenly raising his face and looking round the table as Mr. Stanton entered—'let us proceed to business, gentlemen.' Mr. Stanton and the Attorney-General said, as they walked on together, it would be curious to notice whether anything ensued on this, and they agreed to notice. He was shot that night."

When John Skeil of Hickory township, Pa., met a snake in the woods that was eight feet in length, he became charmed, and found it impossible to remove his eyes from the dazzling orbs of the monster. Finally he became unconscious and fell to the ground. The snake immediately coiled himself about the body, but the arrival of Mr. Skeil's son saved his life. The reptile was shot, but Skeil lies at home in a very critical condition.

Irish Woes.

A MEMBER OF PARLIAMENT'S ACCOUNTS—THE STORY OF NORAH GOLDEN.

Mr. Charles Russel, M. P. for Dundalk, is writing, in letters to the London *Telegraph*, his observations in portions of southern Ireland. In county Kerry there has been less suffering than elsewhere, and until recently the Land League had not made it the scene of active operations. Yet Mr. Russel paints a dismal picture of its condition. Poor land, high rents, and gaunt, half-naked people were the rule everywhere. But perhaps a more vivid idea of the actual state of things will be gathered from the following story of a sufferer which he reports. He writes as follows:—

Several stories of hard treatment were told us. I will give one with name and address, as the poor woman having been evicted from her holding it is beyond the power of my narrative to injure her further. Apparently she was aged about sixty-five years, and if ever a woman spoke with a sense of wrong upon her, Norah Golden did. It would seem that the land had been transferred from her name to that of her son. "I have held a farm at Roads for forty-two years. I have been twenty-two years a widow. I had the grass of four cows under Morrough Bernard. The rent, eighteen years ago, was £6 15s. It was then raised to £11 4s. Three years ago it was raised to £12 13s. 4d. Griffith's valuation is £5 14s. We owed a year's rent on the 1st of May, 1879, and a decree was got against us last November. We were turned out on March 25th last, the day of the annunciation. While I was at mass they broke in my door. It was locked, and they put my furniture on the side of the road. Last November fair my son John offered half a year's rent, and was refused unless I paid £2 10s. for costs. My son went in again to see if he would take it, but he was refused. My son, out of heart, went to America, and the rent we offered, and £3 10s., which I borrowed, went to pay his passage to America. His wife and six children are in Cahisciveen with me. The eldest of his children is only nine years, and the youngest two months. My son has sent me over since he went £6 from America. I saw the landlord myself. It was in his new married time. I laid £10 before his honour, but

HE REFUSED,

saying I was ejected, and he could not make a tenant of me for six months. I went to him the next day and he gave me the same answer. I followed him into the street, and I had a mind to curse him, as he would not give me the land for my son and large family. I made up the £10 by selling a young springer, and I borrowed 30s. from a shopkeeper in this town, John Dennehy, and I sold a new milch cow for £7 10s. The sheriff's expenses, with £12 13s. 4d. for the rent, made up the money to £15 7s. To-day (18th September) three weeks I sent a bank draft for £15 7s. to Morrough Bernard, at Killarney, and it came back to me by his driver, Morris Collins, the next Wednesday. When I opened the letter the draft was in it. Charley Clifford read the letter for me, and said that it told me to go to Downing, Tralee (Morrough Bernard's solicitor), and if I settled with him I would get possession again. I walked the next day to Tralee, every step of the way, forty miles, until I made out Downing's office. I reached him my letter, and he said it was of no value to him. He asked me had I money, and I said I had the redeeming of the land with me. He said, 'I can do nothing for you, my poor woman.' I did not get a letter from Morrough Bernard this length of time. I began to cry to think they would make an ape of me, sending me so far. I went again last Thursday fortnight to Tralee, and remained there five days. I went then to Mr. Broderick, an attorney who bears the best name of doing good to the poor in the country. I told him that when my son got married I got his name put down for the rent. Mr. Broderick said he had no other case but mine in Killarney, and that he could not go down for my case unless I paid him £3 10s., but I had only £1. I do not think Mr. Bernard will

PUT ME BACK ON THE LAND.

My son drained and fenced the land, and put a road on it. He made more improvements on it than his father did before him. My son said to Morrough Bernard, when he brought him the rent, that he improved every inch of the land himself. There was a field on it eighty spades long and fifty spades in breadth (a spade is 5½ feet) that man never worked till my son drained it, and now it is covered with oats. In the old time water would have got in on it over a man's knee boots. There is another field thirty-two spades long, and my son drained it, and now it is in tillage. The oats taken out of my garden now is worth 1s. 4d, a barth (a barth means twenty sheaves). My potato seed was long in the ground when we were put out. The landlord was here on the eighth of August last, and he took a foreign road so that he might not meet me, the way I could not redeem my land. He knew I was in town. He said when I offered him the £10 I was not the tenant at all; that the land was in my son's name. He never gave a lease on the property, nor his father before him. Nearly all his tenants got relief from the parish priest during the last winter. The rent, I believe, was raised on all the other tenants, same as when it was raised on me." I leave the story to speak for itself.

THE HOUSEKEEPER.

SISTER MAG'S CAKE.—Two and a half cups of powdered sugar, three-fourths cup of butter, one cup sweet milk, three cups flour, four eggs, one lemon, juice and rind, one small tablespoonful soda; bake in a square or oblong tin, and frost with whites of two eggs beaten stiff with powdered sugar.

FRICASSEE OF HARICOT BEANS.—One pint of beans, three ounces of butter, the juice of one lemon, and one ounce of parsley. Steep the beans two hours in cold soft water, adding a saltspoonful of salt and one ounce of butter. When they boil, simmer them shortly two hours or more; put them into a stewpan with a little pepper, salt, chopped parsley, two ounces of butter and the lemon juice. Sit them on the fire a few minutes and stir them well.

LENTIL SOUP,—One quart of lentils, two pounds and a half of parsnips, two pounds of celery, two ounces of eschalots or leeks, one ounce of chopped parsley, and two ounces of butter. Wash and pick the lentils, steep them twenty-four hours in soft water, set them on the fire in four quarts of spring water, add the vegetables and some salt, boil till quite soft, rub through a fine colander or coarse sieve, adding boiling water as required; return it to the pan, season with pepper and salt, stir in the butter and boil a few minutes.

EGGS OF THE RISING SUN.—Boil six eggs ten minutes, remove the shells and cut each egg in halves lengthways; take the yolks out and pass them through a wire sieve on a dish; shred the whites into fine strips, and put these in white sauce, made as follows: one pint of milk thickened with flour in the same way as for butter sauce, add two teaspoonfuls of chopped parsley, a little cayenne, nutmeg, and salt, and a small piece of fresh butter; mix well together, and dish up, with the yolks on top; brush over with a little clarified butter; to be put in a moderate oven until slightly browned.

CHEESE AND MACARONI.—Quarter of a pound of cheese, two ounces of macaroni, and half a teacupful of cream. Wash the macaroni, and let it steep half an hour in cold spring water; cover with a plate and set in a moderate oven, or on a stove, till the macaroni is tender but not soft; drain in a colander, and put it on a dish with a little butter, salt, and white pepper, adding the cream; cover it with good toasting cheese, cut in thin slices, without crust; sit it in the oven, and if not lightly browned in ten minutes, set it in a Dutch oven before the fire for one or two minutes.

MINCE-MEAT FOR PIES.—Shred and chop very fine two pounds of beef suet; by dredging the suet occasionally with flour it chops more easily and does not clog; boil slowly, but thoroughly two pounds of lean round of beef and chop fine, (mix all the ingredients as they are prepared;) stone and cut fine two pounds of rasins; wash and pick two pounds of currants; cut fine half a pound of citron; chop two pounds of apples, weighing them after they have been peeled and cored; a tablespoonful of salt, a teaspoonful of ground cinnamon, a grated nutmeg, a saltspoonful of allspice, half as much cloves, two ounces of rose-water, half an ounce of essence of almonds, half a pint of brandy, and a quart of cider. This may be kept in a cool place all Winter. If too dry add more cider.

THE death was lately announced of Gen. Low, son of Sir Hudson, Napoleon's custodian at St. Helena, whose wife was one of the New York De Lancys.

Suggestions About Saws.

The cause of saws heating at the centre is almost invariably the heating of the mandrel, or the collars not being properly turned; and sometimes the saw may not be in proper line, with the carriage, or the track out of order. Saws heating at the rim and not in the centre is generally the result of the saw leading too much into the log, causing it to bear too hard against the outside guide. Often the machinist in putting in the log pins of a mandrel will turn them too large, then drive them into the collar with a hammer and swell the metal around the pins without noticing the defect. In such a case the saw will only have a bearing at a small surface around the pins and never fit or hang true until the metal is chipped or filed off level with the face of the collar. Often the collars will not run true; this defect should be corrected at once.

Where very thin saws are used solid toothed saws are recommended by Emerson for two important reasons. A thin saw requires more teeth, in order to do a given amount of work, because the teeth are not so stiff as those of a thicker saw and therefore more liable to spring sideways and follow the grain of the timber. Another reason is that sawyers generally have had more experience with solid saws than with inserted toothed saws and consequently, and having more confidence will persevere and make them go under ordinary difficulties, when they might condemn an inserted tooth under similar circumstances.

In the use of the emery wheel proper care should be exercised, for there is more danger from their use than either the file or a burr gummer. If the condition of the saw is such that a considerable depth is required to be cut in the plate, the operation should be performed by going over the saw several times, only allowing the wheel to grind away as much as can be done without heating the saw to a blue. There is no excuse whatever for crowding the emery wheel so as to heat the saw red hot, as this is sure to injure the saw, often glazing it, where the wheel comes in contact so hard that a file will make no impression whatever. From these hard spots on the outer surface small cracks commence, invisible at first to the eye, but gradually enlarging until they become dangerous fractures. Hacking the face of the wheel with a cold chisel, or the corners of an old file, will often prevent its glazing so that it is not as liable to heat the saw. After a few times gumming, however, the saw will enlarge on the rim so that the slightest warmth will cause it to buckle, and there is no remedy left but to send it to a saw maker and have it re-hammered. Some, however, entertain the erroneous impression that a saw re-hammered will never run as well as when new. On the contrary, a saw re-hammered will generally run better than when new, because all the elasticity (or nearly all) is worked out of the saw by using, and it generally works stiffer than when new.

Civilian Combatants.

Sir Donald Stewart (a correspondent writes to us) is reported to have expressed his surprise at a meeting held recently at Simla at finding a Roman Catholic chaplain in the fighting line of a British regiment during an engegement; and to have mentioned how he had also on another occasion seen a chaplain with voice and walking-stick rally some scattered cavalry. Snch things have been known before in our military history; and indeed some of the early bishops, clad in mail and armed with the mace which drew little or no blood, did considerable execution in the hostile ranks. Civilian or ecclesiastical combatants, however, are rarely suffered upon a modern battle-field; though, even so late as the Russo-Turkish war, a chimney-pot has been detected in the midst of the fray. At Waterloo, as the Enniskillen dragoons prepared to charge the French columns, an excited rider in "mufti," posted on their left, accompanied by a pale lad with bandaged face, and one arm in a sling, shouted to them, "Now's your time!" This was Wellington's friend, Charles, fourth duke of Richmond, who, with his son, Lord William Lennox, was for a long time in the thickest of the fight on that great day. At the Berlin manœuvres last month one of her majesty's chaplains was a conspicuous figure at every one of the mimic encounters, his clerical garb being relieved by a pair of servicable brown shooting-gaiters.

"MISSIONARY teas" are very popular. The gossip is confined exclusively to people in foreign parts, and is harmless.

ROYAL AND NOTABLE PEOPLE

THE Prince of Wales rides about a great deal in a private hansom cab, which has many comfortable improvements. Among these is a travelling clock with a luminous dial-face set in the centre of the splash-board.

WHEN the Duke and Duchess of Connaught were visiting Hampstead, their plain carriage passed unobserved through the crowds that had assembled to greet them; but when the gay turnout of the sheriff appeared, the air was rent with cheers, much to the amusement of all in the secret, who then saw what the populace expect of royalty.

MISS EDMONIA LEWIS, the sculptor, who is of mixed African and Indian parentage, has had a more than common measure of success in her profession. The Pope long since visited her studio, and blessed her work; the Marquis of Bute bought one of her groups for an altarpiece; and another, the "Old Arrow-maker and his daughter," was bought by Lady Ashburton.

IN Sir Robert Peel's strong Government of 1841 there were three Scotchmen. At one time Scotland sent Macaulay, Campbell, Hume, and Fox Maule to the House of Commons. Now, except Mr. Gladstone, the only contingent of political intelligence which Scotland, with its dominant liberalism, contributed at the last election was Mr. Trevelyan, Grant Duff, and Dr. Playfair.

WHILE riding out on horseback at Milan, recently, King Humbert passed a peasant driver who, at the moment, fell from his seat between his horses' heels and the wheels of his wagon. The King leaped from his horse, snatched the peasant frem his perilous position, but not before the wheels had crushed him fatally. His family will be hereafter taken care of by the King.

WHEN the court of Victor Emmanuel was transported from Turin to Florence, in 1864, the Marquis de Breme was master of ceremonies, and a very severe one. To Prime Minister Ricasoli he prescribed a court dress before he could be received by the King. Ricasoli replied: "Either I must be received in a plain frock-coat or not at all. The Ricasolis have never worn livery of any kind."

ONE of General Garfield's closest friends is Major Swaim, who is spoken of as likely to be his private secretary. He is a compactly built man, about fifty, square-shouldered and deep-chested. At first he appears brusque, but this disappears on acquaintance, and he becomes very companionable. He is an Ohio man, has seen much of the world, and is a very good judge of men. General G. is said to rely greatly upon his judgment.

THE Carthusian Fathers, who have recently established themselves in Sussex, England, on a large scale, are in treaty with the Duke of Norfolk for his estate near Horsham, which is at a short distance from their enormous menastery at Cowfold. The price offered is said to be considerably under $150,000, although the property is worth a good deal more; but it is supposed that the Duke is willing to make a sacrifice in favour os those whom he considers martyrs.

PRINCE ROLAND BONAPARTE, son of Pierre Napoleon, and Mlle. Maria Blanc, daughter of the late *entrepreneur* of the Monaco gaming-house, have decided to leave Ermenonville, the little village near Senlis, where they were to spend their honeymoon, and are thinking of visiting the Florentine palace of San Donato, with which the bride was presented on her wedding day. They will stay for a short time at Nice, where the fashionable world is now beginning to assemble. There is much curiosity to see the heiress in the vicinity of Monte Carlo.

ONE of the Empress of Austria's brothers, Charles Theodor, Duke in Bavaria, has successfully passed the examinations qualifying him to practise as an oculist. His first operation for cataract, performed upon a citizen of Dresden shortly after he had obtained his diploma, resulted in the complete restoration of sight to his patient; and he has again operated with entire success upon a sufferer from cataract in the Munich Hospital. The Prince is a regular attendant at Prof. Arit's lectures on diseases of the eye, and has in no respect relaxed the arduousness of his studies since he became a regularly licensed member of the faculty. If report speak truly, Dr. Charles Theodor is fairly on the way to attain high rank among the more eminent practical oculists of southern Germany.

MARKET REPORTS.

CANADA LUMBERMAN OFFICE,
TORONTO, 29th Dec. 1880.

During the holidays there has been a lull in lumber yards. Builders are clearing up old stocks to commence the business of the new year, of which the prospect is good. Stocks generally are light throughout Western Canada. The town of St. Thomas has probably the best supply on hand of any of our Western towns. At the mills stocks are moderate and nearly all sold. Shippers are getting supplies in according to demand. The Northern Railway has made liberal concessions to parties holding stock along the line, increasing the local car load to 12 ton and through to 13 tons, the standard on the Midland is 10 and 12 tons respectively. At Albany, New York, and other cities across the lines a fair business is going on, with a prospect of greatly reduced stocks by spring. In our logging camps all is bustle and activity, and so far the progress is all that could be desired.

TORONTO.

WHOLESALE RATES.

Mill culls	$ 5 50	@	7 00
Shipping cull stocks	10 00	@	11 00
Shipping culls, (in. box,)	8 50	@	10 00
Dressing inch	11 50	@	13 00
Flooring, 1¼ & 1½ in	12 00	@	13 00
Joisting and scantling	9 50	@	10 50
Mill run sidings	12 00	@	14 00
Pickings	17 00	@	20 00
Clear and pickings	25 00	@	30 00
Lath	1 25	@	1 40
Shingles, No. 1	2 10	@	2 20
No. 2	1 40	@	1 60

LONDON, ONT.

RETAIL RATES.

Common Lumber	$12 00	@	13 00
Stock boards	14 00	@	15 00
Clear in. and 1½ to 2 in.	25 00	@	30 00
Bill stuff, up to 16 feet		@	14 00
do. over 16 feet $1 for every two feet extra.			
Flooring and vessel lumber.		@	20 00
Dressing lumber rough	17 00	@	18 00
Lath, per 1000 feet		@	4 25
Shingles No, 1, per M		@	2 75
do. per square		@	2 00

OTTAWA.

The following are quotations in the Ottawa market :—

12 in. stocks, good	$18 00	@	20 00
12 " S. culls	10 00	@	10 50
10 " good	16 00	@	18 00
10 " S. culls	9 50	@	10 50
Strips, good	17 00	@	20 00
" culls	6 50	@	7 50
Sidings, 1¼, 1½, and 2 in., good	23 90	@	26 00
" " culls	9 00	@	10 00
Lath (₩ 1,000 pcs.)	0 00	@	1 00
Deals (₩ Quebec standard) 1st	0 00	@	110 00
Deals (₩ Quebec standard) 2nd	0 00	@	65 00
Deals (₩ Quebec standard) 3rd	0 00	@	58 50
Cull deals (₩ M. ft.)	6 50	@	8 59

CHICAGO.

YARD RATES.

First and second clear, 1@ 1¼ in	$43 00
First and 2d clear, 2 in	45 00
Third clear, 1¼ @ 2 in	38 00
Third clear, 1 inch	35 00
1st and 2d clear dressed siding	20 00
1st com. dressed siding	18 50
Second common	17 50
Flooring, 1st com. dressed	34 00
Flooring, 2d com. dressed	32 00
Flooring, 3d com. dressed	24 00
Box bds, A, 13 in. and up	43 00
Box bds, B, 14 in. and up	37 00
Box boards, C	26 00
A stock boards, 10 @ 12 in., rough	37 00
B stock bds, 10 @ 12 in	33 00
C stock bds, 10 @ 12 in	28 00
Common stock boards	17 00
Cull boards	$10 00 @ 11 00
Fencing, No. 1	13 50
Fencing, No. 2	11 50
Common boards	11 50 @ 12 50
Dimension stuff	11 50
Dimension stuff, 20 @ 30 ft	12 50 @ 20 00
Small timber, 4 x 4 to 8 x 8	12 00
Round posts, cedar	15 00
Pickets, dressed and headed, flat	21 00
Pickets, do., square	21 00
Pickets, rough	15 00
Clear shingles	3 25
Extra "A" shingles	2 90
Standard "A" dry shingles	2 65
Shaded "A" shingles	1 10
No. 1 shingles	1 00
Cedar shingles	2 50
Lath, dry	2 50

BUFFALO.

We quote cargo lots :

Uppers	$35 00	@	40 00
Common	16 00	@	19 00
Culls	11 00	@	12 00
Assorted lumber in car lots or boat loads :			
3 uppers 1 inch	$	@	40 00
Do. 1¼ and 1½ in	40 00	@	42 00
Do. 2 in	45 00	@	47 00
Do. 2½, 3 and 4 in. special			
Pickings 1 inch	28 00	@	30 00
" 1¼ and 1½ in	33 00	@	35 00
" 2, 3, and 4 in., special	22 00	@	00 00
Shelving	22 00	@	24 00
Cutting up	22 00	@	24 00
Sidings, com., 1 in	16 50	@	17 00
" 1¼ in. and over	17 00	@	20 00
Common, stocks	16 50	@	17 00
Box, all thicknesses	13 00	@	14 00
18 in XXX shingles	3 60	@	3 70
18 inch clear butts	2 60	@	2 70
Lath	1 75	@	1 80

We quote wholesale prices of hardwood lumber, delivered on cars or boat :

Walnut ½ inch clear	$65 00
⅝ inch, 1sts and 2nds	70 00
¾ inch, 1sts and 2nds, 14 feet coffin stock	73 00
1 inch 1sts and 2nds	75 00
1¼, 1½, 1¾, and 2 inch	77 00
2½ inch and thicker	80 00
counters	150 00
newels 5x5 to 10x10	95 00
common in. & thicker	55 00
culls, inch	35 00
culls, 1¼ inch	35 00
White ash, Ohio 1st and fine 2nds	35 00
Whitewood, inch	30 00
⅝ inch	28 00
¾ in coffin stock, 14 ft	30 00
square, 4x4 to 10x10	33 00
Chestnuts, 1sts and fine 2nds,	32 00
Maple	25 00
White oak, Ohio	35 00
Cherry, inch and thicker	55 00
Butternut	50 00
Hickory, best Ohio	35 00

CLEVELAND.

ROUGH LUMBER.

Uppers, thick	$45 00
inch	42 00
Box, thick	36 00
inch	32 00
2½, 3 and 4 in clears special	
Flooring strips, 6 in, No. 1	34 00
2	24 00
Fencing strips, 6-in, No. 1	16 00
No. 2	14 00
Select common, thick	28 00
inch	24 00
Common	15 00
Culls	12 00
B. bds No. 1 12 in	25 00
No 2	16 00
No	14 00
No 1 18 ft	20 00
No 2 18 ft	18 00
No. 3 18 ft	15 00
Bill stuff to 18 ft	13 00
Bill stuff over 18 ft. adds 75c to $1 per ft. per M.	
Shingles, XXX	3 60
clear butts	2 60
Lath	2 25
Surfacing one side adds to the price of rough lumber	1 00
2 sides	1 50
Norway bds and strips	18 00
common	13 00

DRESSED LUMBER.

Flooring and drop siding clear	$40 00
box	30 00
select com	28 00
common	20 00
Siding, ½ in. bevel clear	00
box	20 00
select common	15 00

Working lumber matching flooring and drop siding, $2 ; working ½ in. siding, $4.

OSWEGO, N. Y.

Three uppers	$40 00	@	43 00
Pickings	30 00	@	32 00
Pine, common	20 00	@	22 00
Common	14 00	@	16 00
Culls	12 00	@	14 00
Mill run lots	16 00	@	20 00
Sidings, selected, 1 inch	30 00	@	33 00
1¼ inch	30 00	@	38 00
Mill run, 1x10, 13 to 16 feet	16 00	@	20 00
Selected	20 00	@	25 00
shippers	15 00	@	16 00
Mill run, 1 and 1¼ in. strips	15 00	@	18 00
Culls, selected	20 00	@	24 00
1x6 selected, for clapboards	24 00	@	35 00
Shingles, XXX, 18-in. pine	3 00	@	3 75
XXX, 18-in. cedar	3 00	@	3 50
Lath	1 50	@	1 75

ALBANY.

FREIGHTS.

To New York ₩ M. feet	$ 1 00
To Bridgeport	1 25
To New Haven	1 25
To Providence	2 00
To Pawtucket	2 25
To Norwalk	1 25
To Hartford	2 00
To Middletown	1 75
To New London	1 75
To Philadelphia	2 00

Quotations at the yards are as follows :

Pine, clear, ₩ M	48@60
Pine, fourths	43@55
Pine, selects	38@50
Pine, good box	17@28
Pine, common box	14@17
Pine, 10 in. plank, each	38@42
Pine, 10-in. plank, culls	21@23
Pine boards, 10-in	25@28
Pine, 10-in boards, culls, each	17@18
Pine, 10-in. boards, 16 ft. ₩ M	28 00
Pine, 12-in. boards, 16 ft	28 00
Pine 12-in. boards, 13 ft	28 00
Pine, 1¼-in., siding, select	42 00
Pine, 1¼-in. siding common	18 00
Pine, 1-in. siding, selected,	40 00
Pine, 1-in. siding, common	16 00
Spruce boards, each	16
Spruce, plank, 1¼-in., each	20
Spruce, plank, 2 in., each	30
Spruce, wall strips, each	11@11½
Hemlock, boards, each	13
Hemlock, joist, 4x6, each	30
Hemlock, wall strips, 2x4	9½
Black walnut, good, ₩ M	85 00
Black walnut, ⅝-in	78 00
Black walnut, ¾-in	78 00
Sycamore, 1-in	28 00
Sycamore, ⅝-in	22 00
White wood, 1 inch and thicker	40 00
White wood, ⅝ inch	30 00
Ash, good	43 00
Ash, second quality	30 00
Cherry, good	60 00
Cherry, common	35 00
Oak, good	42 00
Oak, second quality	25 00
Basswood	25 00
Hickory	40 00
Maple, Canada	30 00
Maple, American	28 00
Chestnut	40 00
Shingles, shaved, pine, m	6 00
" " 2d quality	4 50
Shingles, extra, sawed, pine	4 25
Shingles, clear, sawed, pine	3 25
Shingles, cedar, mixed	2 75
Shingles, hemlock	2 00
Lath, hemlock	1 50
Lath, spruce	2 00

DETROIT.

Yard rates, continue as follows :

Uppers, all thicknesses	$40 00	@	45 09
Selects	35 00	@	38 00
Fine common, thick		@	30 00
No. 1 common stock, 1x12	16 00	@	18 00
Common shippers, 1x12	13 00	@	14 00
Flooring, select		@	25 00
common		@	22 00
Roofing, matched		@	16 00
Siding, clear		@	24 00
A select		@	20 00
B common		@	16 00
Ceiling, select		@	30 00
common		@	25 00
Shipping culls		@	12 00
Mill cull boards		@	10 00
Dimension or bill stuff to 16 feet		@	14 00
18 to 24 feet		@	15 00
longer than 24 feet	16 00	@	20 00
Shingles, clear, 18 inch		@	4 00
inch clear, 18 inch		@	2 75
Lath		@	2 25

REID & CO., WHOLESALE LUMBER DEALERS. Lumber, lath, shingles, &c Car lots to suit customers. Best culls in the market for from $6 to $7 per M.

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Intercolonial Coal Mining Co.,

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DRUMMOND COLLIERY.

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MONTREAL.

The coal is now being received at Toronto by several of the dealers—W. J. Keith, C. J. Smith and others.

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File Works, 35 Sherbourne Street, Toronto, Ont.

Old Files reground and re-cut equal to new for use. During the past year I have re-cut nearly 5,000 dozen of old files for mill owners and others in Ontario and Quebec. Prices—per dozen for Mill Files, 8 in. $1.50; 10 in. $2; 12 in. $2 75; 14 in. 3.75. Other kinds *pro rata*. Quotations from these rates to large consumers.

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NEW FEATURES
BLACK AND COLOURED INKS,
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Also a Special Copying Ink for use on Rubber-Stamps.

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Printographs, $1.00 and upwards, according to size. Inks, 25 cents per bottle. Copying Pencil, 20 cents each. Our manufactures can be sent to any address on receipt of price.

PIM & CO.,

Manufacturers, 61 King Street East, Toronto.

CAUTION—As there are worthless imitations being sold under different names the public are cautioned against buying any but "Pim's Royal Printograph," as none but those bearing our name are genuine.

SAVE YOUR COAL

J. W. ELLIOT'S

PATENT SAVER.

The First Object—Is to produce the greatest amount of heat from a given amount of fuel, and is gained by an arrangement of the three way draft passage and some twelve feet of flue pipe, which is beat down and around the base, and the heat is absorbed by the atmosphere through direct radiation from every part of the stove. Another object of the invention is to secure for heating purposes the greatest possible benefit of the fire contained in the stove, and is accomplished by placing around the body of the stove a series of internally projecting pockets overlapping the fire pot, and so formed that the air of the room is admitted into the lower end of the pockets, and, after passing through them, re-enters the room, having become intensely heated through contact with the inner sides of the said pockets, which are immediately over the hottest part of the fire, thereby producing far greater results from a given amount of fuel than any other stove. *Second Object*—An evaporator which is a part of the stove. The cover becomes a water tank, and is an effective evaporator; the pivot on which it turns is an iron tube screwed into the base of the tank, while the lower end is closed and rests in a pocket inside the dome, thereby producing a greater or less amount of vapor in proportion to the intensity of the heat. *Third Object*—There is a double heater, by means of which heat can be conveyed to an apartment above, and supplied with sufficient vapor from the tank. *Fourth Object*—A combined hot air and steam bath can be obtained by closing the damper in the water tank, and causing all the vapor to mingle with the ascending heat. *Fifth Object*—

The Stove becomes Simplified and easy to Contro

All hinged doors and objectionable fittings are abandoned, and are replaced by mica lights with metal tips attached, by means of which the mica may be sprung into place, or removed and cleaned with a dry cloth, or replaced when the stove is red hot, without burning one's fingers At the base of the mica lights eyelets are placed, through which a constant flow of air causes all the gas or smoke to be consumed or to pass off. *Sixth Object*—A base plate of cast iron in the place of zinc or other perishable material. The base plate is raised sufficient for the cold air on the floor to pass up through its raised and hollow cone-shape to the stove, and is rarified, and by this means a constant circulation is continued until an even summer heat is obtained. The circulation above described causes the floor to remain cool underneath the stove. The stoves are altogether cast iron; and the slow consumption of fuel, the direct radiation from all its heated surface, ensures them to last any number of years and to produce no clinkers or waste.

There are two grates, similar in form to the base of a circular basket; the centre grate is rotated to the right or left by the lever a short distance, and by moving the lever still further to the right or left both grates are worked.

To light a fire close all the drafts in the base of the stove open a direct draft in the smoke flue; fill up to the base a the feeder with fine coal, leaving sufficient space for draft, on the coal place the lightwood, leave the tank cover off slightly for draft, until the fire has taken, close the tank cover and open the draft in front.

For further information apply to

J. W. ELLIOT,
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Muskoka District.

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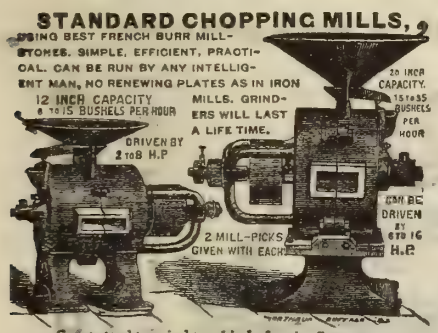
To meet the demands of the LUMBERMEN IN THIS DISTRICT I have opened out a

WHOLESALE SUPPLY DEPOT

At BRACEBRIDGE, where everything in the shape of Lumbermen's supplies or Furnishings, can be obtained in large or small quantities, at wholesale rates.

Outside quotations or correspondence solicited.

F. W. JEFFERY.



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MILLSTONE CHOPPING MILLS FOR LUMBERMEN.

Wil grind as fine as any four-foot stone.

Lumbermen, grind your own Horse Feed.

Make your own Flour with our Portable Grist Mill.

PRICE, Grist Mill complete, $600. Capacity, One and a half barrels of good flour per hour.

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Largest and Best Stock of Lumber in the City at Lowest Prices.

WE HAVE CONSTANTLY ON HAND A LARGE STOCK OF

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Which we sell at Lower Rates than they can be had anywhere else in the City,

SPECIAL ATTENTION GIVEN TO FILLING OF BILLS OF EVERY DESCRIPTION.

Houses built on easy terms of payment. Houses to rent or for sale in any part of the city

☞ Best price paid for Lumber of all kinds, cedar posts, &c. ☜

G. B. MEADOWS,

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Wholesale dealers in Tinware; Sheet Copper and Brass Goods, Coal Oil and Lamp Goods. ☞ Contractor for Builders' Job work.

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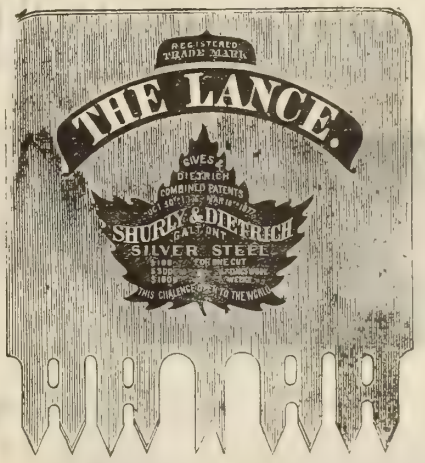
Silver-Steel, Lance-Tooth Cross-Cut Saw!



It stands without a rival. and is the fastest cutting saw in the world. It has beaten the best Canadian and American-made saws 33½ per cent. in every contest. Its superiority consists of its excellent temper. It is tempered under the Secret Chemical Process, which toughens and refines the steel. It gives a finer and keener cutting edge, and will hold it twice as long as any other process. We have the sole right for this process for the Dominion of Canada.

None genuine that are not like the above cut, with registered trade mark with the word "The Lance," and Maple Leaf with our name. Price $1 per foot.

CAUTION. — Beware of Counterfeits. There are inferior counterfeits on the market, which are intended to be sold at a high price upon the reputation of this saw. We will send to any address a saw exactly like any counterfeit, warranted equal in quality or no sale, at 60c. per foot. Therefore do not be humbugged into paying a first-class price for a second-class saw. A fact to bear in mind is that if the material and temper are not of the very best quality the shape of the teeth amounts to nothing. A saw, like a knife, will not cut fast without it will hold a keen, cutting edge. We have cut off a 14-inch sound basswood log in eight seconds with this saw.

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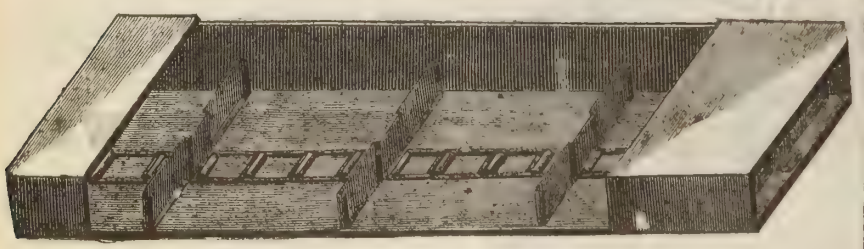

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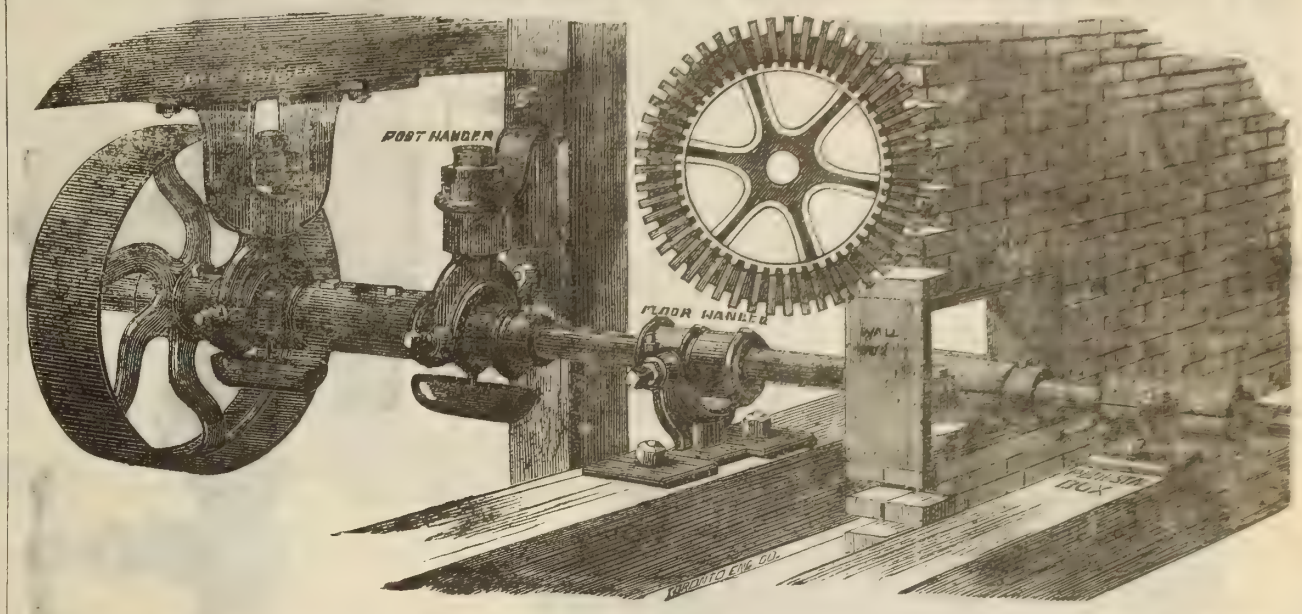

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TORONTO.

SWORN STATEMENTS MADE BY LIFE INSURANCE COMPANIES TO THE CANADIAN GOVERNMENT.

NAMES OF COMPANIES.	TOTAL BUSINESS IN CANADA.		NEW BUSINESS OBTAINED IN '79.		POLICIES BECOME CLAIMS IN 1879.	DEPOSIT AT OTTAWA.
	Total Prem. re. in 1879.	Total Ins. in Force.	No. Pol. Issu'd	Amount of Pol. Issued.		
CANADIAN.	$	$		$	$	$
Canada, Hamilton	536,208	18,945,715	1,402	2,633,100	157,821	54,000
Confederation	184,698	5,928,328	1,012	1,545,650	31,494	77,650
Sun, of Montreal	101,844	3,628,766	524	818,600	18,000	50,400
Ontario Mutual	62,567	2,151,413	427	490,000	11,500	50,541
Mutual, Hamilton	30,805	1,262,855	156	201,500	7,300	81,075
Citizens', Montreal	98,292	1,171,845	183	406,250	11,000	50,400
Toronto	4,674	163,609	19	17,606	1,000	29,160
BRITISH.*						
Standard	152,237	5,437,066	309	697,600	57,836	153,900
Lon. & Lancashire	58,456	1,783,188	225	400,600	20,070	110,000
Brit. & Mercantile	26,980	1,019,294	6	38,000	39,057	Fire & L.
Royal	97,725	1,012,568	20	65,575	20,554	Fire & L.
Commercial Union	22,996	574,560	16	51,373	24,516	Fire & L.
Star	17,546	681,420	38	107,067	21,982	100,343
Liv., Lon., & Globe	10,136	286,004	7	15,433	1,117	Fire & L.
Queen	16,642	394,561	14	77,750	6,000	Fire & L.
Briton Life	4,094	106,910	6	10,500	2,000	54,993
AMERICAN.*						
ÆTNA LIFE	307,847	9,289,325	936	1,386,600	131,883	195,000
Equitable, of N.Y.	180,327	5,266,992	475	1,285,500	38,785	105,000
Union Mutual, Me	91,691	2,732,914	167	277,850	43,704	115,000
Travellers	89,691	3,072,782	215	336,150	10,830	126,100

*In examining the table it must be borne in mind that it relates only to business done in Canada. This comprises the *whole* of the business done by the local companies, but only the Canadian business of the British and American Companies. The Ætna's total income was **$4,350,897.30** in 1879.

☞ Of the $131,883 of "Policies become claims" in the case of the ÆTNA LIFE, **$53,764** was by the maturity of Endowment Policies—*i.e.*, policies payable at death or the end of 10, 15 or 20 years if living. In the other 19 companies, all combined, only a total of $24,948 of this excellent kind of insurance was paid in 1879.

$36,000 was added by the ÆTNA LIFE, the past year, to its Government Deposit, making it the largest of any Company, and nearly 4 times that of most Canadian Companies.

☞ The superior standing of the ÆTNA LIFE is shewn by its total income being **$4,350,897.30**, and by its Canada Branch income being nearly equal to the combined premium income of the whole 9 British Companies, or that of the 3 lesser American Companies, or that of all the Canadian Companies but one. This one has been 32 years getting $536,293, while the Ætna's $307,847 has grown from less than $1000 in the past 14 years.

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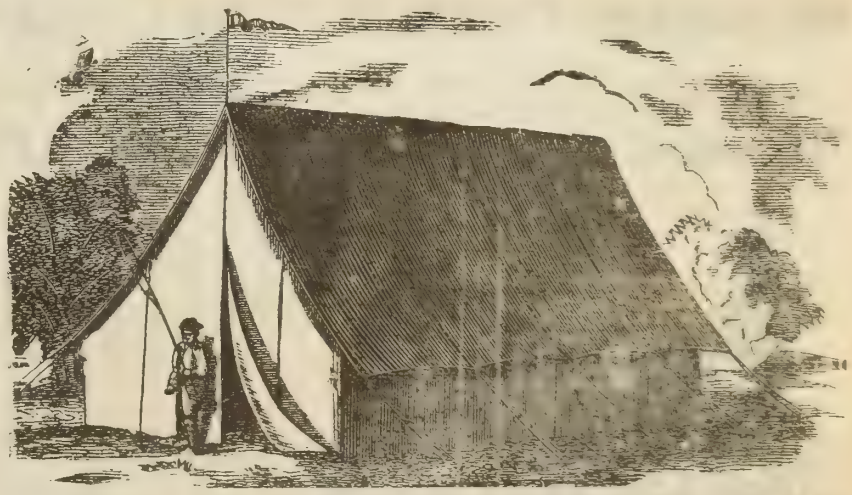

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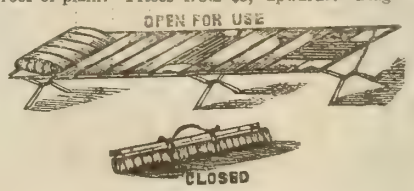

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" "		Hamilton, 1876.
" "		London, 1877.
" Industrial Exhibition,	-	Toronto, 1879.
" "		Toronto, 1880.
International Medal, Centennial Ex.,		Philade phia, 1876.

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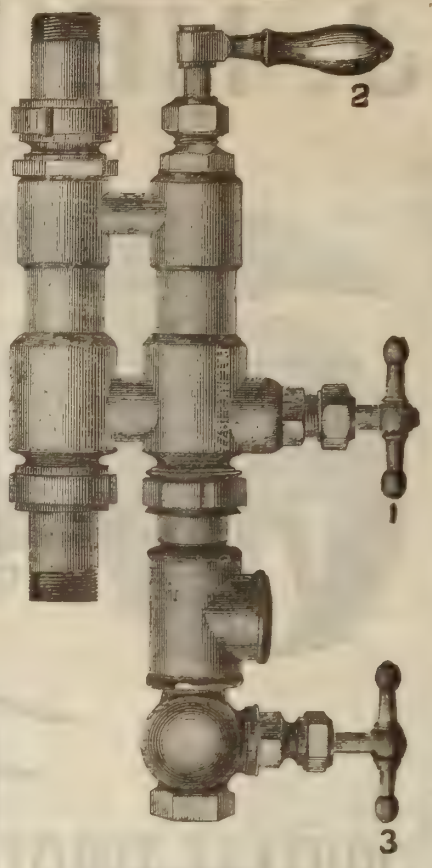

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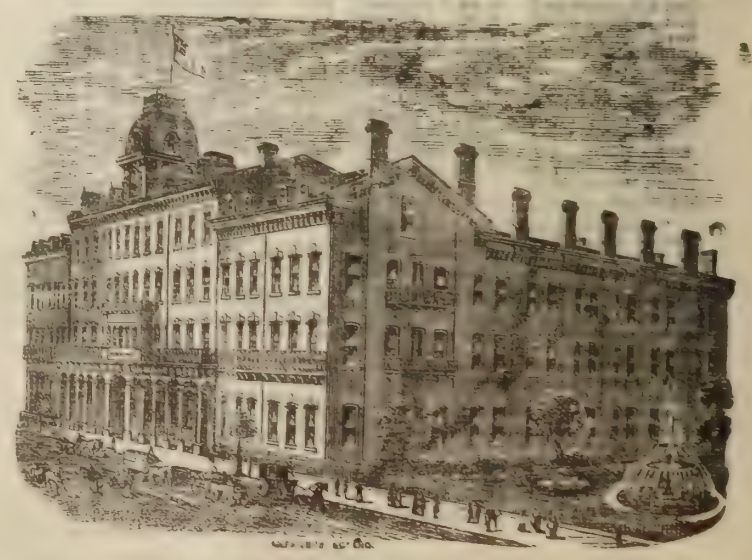

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THE CANADA LUMBERMAN

AND MILLERS' MANUFACTURERS AND MINERS GAZETTE.

TORONTO ENGRAVING CO.

VOL. I.—NO. 7. TORONTO, ONT., JANUARY 15, 1881. $2 PER ANNUM.

THE CARE OF STEAM BOILERS.

The following is from a sheet of instructions to boiler attendants recently issued by the Manchester Steam Users' Association:

GETTING UP STEAM.—Warm the boiler gradually. Do not get up steam from cold water in less than six hours. If possible, light the fires overnight. Nothing turns a new boiler into an old one sooner than getting up steam too quickly. It hogs the furnace tubes, leads to grooving, strains the end plates, and sometimes rips the ring seams of rivets at the bottom of the shell.

FIRING.—Fire regularly.—After firing open the ventilating grid in the door for a minute or so. Keep the bars covered right up to the bridge. Keep as thick a fire as the quality of the coal will allow. Do not rouse the fires with a rake. Should the coal cake together, run a slicer in on top of the bars and gently break up the burning mass. It has been found by repeated trials that under ordinarily fair conditions no smoke need be made with careful hand firing.

CLEANING FIRES AND SLACKING ASHES.—Clean the fires as often as the clinker renders it necessary. Do not slack the clinkers and ashes on the flooring plates in front of the boiler, but draw them directly into an iron barrow and wheel them away.

FEED WATER SUPPLY.—Set the feed valve so as to give a constant supply, and keep the water up to the height indicated by the water level pointer. There is no economy in keeping a great depth of water over the furnace crowns, while the steam space is reduced thereby, and thus the boiler rendered more liable to prime. Nor is there any economy in keeping a very little water over the furnace crowns, while the furnaces are thereby rendered more liable to be laid bare.

GLASS WATER GAUGES AND FLOATS.—Blow through the test tap at the bottom of the gruge hourly, as well as through the tap in the bottom neck, and the tap in the top neck twice daily. These taps should be blown through more frequently when the water is sedimentary, and whenever the movement of the water in the glass is at all sluggish. Should either of thoroughfares become choked, clean them out with a wire. Work the floats up and down by hand three or four times a day to see that they are quite free. Always test the glass water gauges and the floats thoroughly the first thing in the morning before firing up.

BLOW-OUT TAPS AND SCUM TAPS.—Open the blow-out tap in the morning before the engine is started, and at dinner time when the engine is at rest. Open the scum tap when the engine is running, before breakfast, before dinner, and after dinner. If the water be sedimentary, run down half an inch of water at each blowing. If nots edimentary, merely turn the taps round. See that the water if at the height indicated by the water level pointer at the time of opening the scum tap. Do not neglect blowing out for a single day, even thongh anti-incrustation compositions are put into the boiler.

SAFETY VALVES.—Lift each safety valve by hand in the morning before setting to work and see that it is free. If there is a low water safety valve, test it occasionally by lowering the water level to see that the valve begins to blow at the right point, When the boiler is laid off, examine the float and level to see that they are free, and that they give the valve the full rise. If safety valves are allowed to go to sleep, they may get set fast.

SHORTNESS OF WATER.—In case the boiler should be found to be short of water, draw the fires if practicable, and draw them quickly, beginning at the front. In some cases it may be more convenient to smother the fires with ashes or with anything else ready to hand. If the fires are not drawn leave the furnace doors open, turn on the feed, lower the dampers, shut down the stop valve if the boiler be one of a series, and relieve the weight on the safety valves so as to blow off the steam. Warn passers-by from the front of the boiler.

USE OF ANTI-INCRUSTATION COMPOSITIONS.—Do not use any of these without a thorough knowledge of their effects. If used never introduce them in heavy charges at the man hole, or safety valve, but in small daily quantites along with the feed water.

EMPTYING THE BOILER.—Do not empty the boiler under steam pressure, but cool it down with the water in; then open the blow-out tap and let the water pour out. To quicken the cooling the damper may be left open, and the steam blown oft through the safety valves. Do not on any account dash cold water on to the hot plates. But in cases of emergency, pour cold water in before the hot water is let out, and mix the two together so as to cool the boiler down gradually and generally, and not suddenly and locally.

CLEANING OUT THE BOILER.—Clean out the boiler at least every two months, and oftener if the water be sedimentary. Remove all the scale and sediment as well as the flue dust and soot. Show the scale and sediment to the manager. Pass through the flues, and see not only that all the soot and flue dust have been removed, but that the plates have been well brushed. Also see whether the flues are damp or dry, and if damp find out the cause. Further, see that the thoroughfares in the glass water gauges and in the blow-out elbow pipes, as well as the thoroughfares and the perforations in the internal feed dispersion pipe and the scum pipes are free. Take the feed pipe and scum troughs out of the boiler if necessary to clean them thoroughly. Take the taps and the feed valves to pieces; examine, clean, and grease them, and if necessary grind them in with a little fine sand. Examine the fusible plugs. Do not put any blocks under the pipes in the hearth pit.

PREPARATION FOR INSPECTION.—Have the boiler cooled and carefully cleaned out as explained above. Show both scale and sediment to the inspector, as well as the old cap of the fusible plug, and tell him of any defects that may have manifested themselves in working, or of any repairs or alterations that may have been made since the last examination.

FUSIBLE PLUGS.—Keep these free from soot on the fire side, and from incrustation on the water side. Change the fusible metal once every year, at the time for preparing for annual examination.

GENERAL KEEPING OF BOILER.—Polish up the brass and other bright work in the fittings. Sweep up the flooring plate frequently. Keep water out of the hearth pit below the flooring plates. Keep the space on the top of the boiler free, and brush it down once or twice a week. Take a pleasure in keeping the boiler and the boiler house clean and bright, and in preventing smoke.

THE BRUSH ELECTRIC LIGHT.

The ancient saw anent the share of milk obtained by the still suckling seems to b pretty well borne out in the progress of the brush system of electric lighting. A dozen systems, so-called, have made more noise and have attracted more newspaper attention; but while they are for the most part still "promising," the Brush system has been quietly taking possession of the field. How far this is due to the superior busness management of the company controlling the Brush patent it is impossible to say; the indications are, however, that the remarkable success of the brush system is mainly due to the practical genius of Mr. Brush in meeting the requirements of outdoor or large room lighting with an efficient generator, and a lamp which is so simple in construction so automatically regular in action, and so easy to keep in order, that practical business men can afford to use it. It is perhaps the least ornamental in appearance of all lamps, but it gives the light required, and calls for comparatively little care. On the score of economy the users of the lamp profess to be well satisfied; and the rapid and largely extended adoption of the system, abroad as well as at home, would seem to justify the favourable judgment which those who have tried the lamp have freely expressed with regard to its practical value.

The latest list of prominent users of the Brush light embraces twenty-five rolling mills, iron and steel works, machine shops, car works, and the like; twenty saw mills, paper mills, oil works, printing houses, and other factories and manufacturing establishments; twenty woollen, cotton, linen, and silk factories, several of them employing over a hundrsd lights each; a dozen mines, smelting works, etc., more than a dozen wholesale and retail stores, using from six to sixty-four lights: a dozen public parks, docks, summer resorts, and the like including a mile and a half of river front and docks at Montreal; circuses, colleges, hotels steamers; and large numbers of city lights in San Francisco, St. Louis, Chicago, Cleveland, Detroit, Grand Rapids, and other cities besides New York and Brooklyn, where a hundred or more lights are already in use. The contracts of the company in San Francisco called for the erection of about a thousand lamps by the beginning of the current year. Wabash, Indiana, claims the credit of being the first large town to adopt the electric lamp for general illumination, four Brush lights, of 3,000 candle power each, on the court house dome, sufficing for the outdoor needs of the entire town of 10-000 inhabitants.

The company formed in London to introduce the Brush light there have already placed two hundred lights in various parts of the city, and have ordered from Cleveland nearly as many more, contracts having been signed for the lighting of the Houses of Parliament, Charing Cross Station, Ludgate Hill Station, Blackfriars' Bridge, St. Paul's Churchyard, and other conspicuous places. Even the extremely conservative British Admiralty has taken kindly to the Yankee invention, 432 lights have been purchased for the use of the Royal Navy. Mr. Brush is now making a 40-light machine (80-000 candles) designed to throw the entire current into one huge lamp, which has been ordered for the British torpedo service. The carbons for this artificial sun will be as large as a man's arm, and the light, when directed by a projector of corresponding size, will of itself be a formidable weapon of defense. With a proper system of curtains it will be possible to flash upon an approaching enemy a sudden glare of light that will be little less than blinding.

A less imposing but more admirable application to this light, and one that is being rapidly adopted, is in connection with locomotive headlights. The generator is operated by a small engine taking steam from the boiler and placed opposite the air compressors of the Westinghouse breaks. By attaching the reflector to the forward truck the light may be thrown so as to illuminate the track ahead even when rounding curves. It is obvious that the same machine which supplies the headlight will also furnish a current for illuminating the cars.

Wherever the electric light has been brought into competition with gas for lighting large rooms or open spaces, it has given a good account of itself in comparisons of cost. In very many cases, however, any comparison with gas is out of the question. With gas it is simply impossible to do certain kinds of work at night, or to do it as rapidly and well as by daylight. With the electric light night production is brought up to the level of day production. The gain of one night's increased production will often pay the cost of electric lighting for months. Practical business men are not slow to appreciate advantages of this sort. The question with them is how much will the electric light cost, but can the light be depended on for steady, uniform, certain operation, without requiring too much expert attention? The ability of the Brush lamp to meet such practical requirements would seem to be the secret of its substantial progress.—*Scientific American.*

A sale of over 100,000 feet of lumber was recently made at Ottawa to be shipped by way of Brockville.

Under Fire.

A SOLDIER'S SENSATIONS WHEN ENGAGED IN BATTLE.

Detroit Free Press.)

Whenever you can find a soldier who, under fire, aims low and shoots to make every bullet wound or kill, you will find fifty who are nervously throwing away ammunition, seeming to reason that the reports of their muskets will check or drive the enemy. And yet this nervousness need not be wondered at, for they are playing a game of life and death.

At Malvern Hill, seventeen soldiers, belonging to an Ohio regiment, took cover in a dry ditch, which answered admirably for a rifle pit. A Georgia regiment charged this little band three times, and were three times driven back. The fire was low and rapid, and the loss in front of their guns was more than one hundred killed in ten minutes. Regiments have been engaged for an hour without losing over half that number. The fire of those seventeen was so continuous that McClellan forwarded a brigade to their support, believing that an entire regiment had been cut off.

At Mine Run the writer was just in the rear of a New York regiment which was suddenly attacked. A single company of confedrates, cut off from the regiment and dodging about to rejoin it, suddenly debouched into a field and found itself face to face with the union regiments. Fighting commenced at once. A regiment fought a company, both lying down from cover. I ay so near a third sergeant that I could touch his heels, and I watched his fire. Every time he pulled the trigger he elevated the muzzle of his gun at an angle of forty-five degrees instead of depressing it for the enemy lying down. I saw him repeat this operation fourteen different times. The man next to him fired as many bullets plump into a stump in his front, and the man on the othersi de shot into the ground about ten feet away. Others must have been wasting bullets about the same way ; but that little company was shooting to kill. In that ten minutes of fighting the New Yorkers suffered a loss of thirty-six killed and wounded, and then a bayonet charge doubled them back and opened a gap for the little band's escape. I walked over the ground and found one dead and one wounded confederate. Not a gun, blanket, knapsack or canteen had been left behind.

Any soldier will no doubt fight better under cover than he will in the open field, but cover does not always insure good fighting. At Pittsburgh Landing five thousand union soldiers skulked under the river bank, safe from the enemy's fire, and many of them threw their guns into the river rather than fire a shot. Again, at Yellow tavern, five of Custer's men, dismounted and lying behind a fence, held five companies of cavalry at bay for twelve minutes, and killed twenty-four men, and this without getting a scratch in return.

At Mine Run a union regiment went into the fight with sixty rounds of ammunition per man, making a total of perhaps four thousand bullets. This regiment was placed to act as a check to any advance of the enemy in a certain direction. They did not see thirty confederates during the whole day, and yet it was twice more supplied with ammunition. It fired away at least twelve thousand bullets, and yet only killed two rebel skirmishers.

One cool man will do more execution with his musket than thirty men firing at random. One must have a will strong enough to crowd down all emotions, and oblige his hands to cease trembling at the word. Out of every regiment, not more than one hundred men were fighters. These shot to kill. The others shot at random, and killed only by accident. Thirty cartridges would last a good fighter for an all day's fight. The ordinary soldier would fire out his sixty in an hour and a half, and like enough have his eyes shut half the time when he pulled the trigger. A member of the 2d. Michigan infantry hit the case pretty well at Blackburn Ford. When the skirmishing began he counted his cartridges, and said :

"Just sixty of 'em, and I'll fire three a minute, and have these fellers licked in just twenty minutes to a tick!"

THERE was a fight emminent between two boys. One of them darkly hinted that he was bigger than the other. The smalier, who is the son of a deacon, defiantly retorted : "I don't care if you are as big as a church debt ; you can't scare me.

Sparrows in a Winter Bath.

Yesterday, during the sunny hour of noon, says the Hartford "Times," a flock of about a hundred English sparrows gathered upon and near a painted tin roof having a protected southern exposure, where a good deal of water had collected in the broad flat gutter. The temperature of the surrounding air was abont six degrees below the freezing point, and water was evidently a scarce article, for the eager little birds rushed for it almost furiously. They dashed in by the dozen, fluttering their wings and tails, and sending the shower of water in a spray around. A dozen new-comers would be actually fighting for precedence. As fast as they finished their bath the birds went to the upper slope of the roof, next the sheltering brick wall of a higher part of the building, and there spread themselves out in the sun, like hens shuffling in a warm sand-bath, spreading out their feathers and turning themselves first on one and then on the other side. One sparrow evidently had his misgivings about taking a plunge into a winter bath ; he stood shivering at the edge of the pool, like an undressed boy on the river's bank when he hesitates to take the first plunge of the season. Some of his more venturesome companions tried to push the bird in. One seized him by the tail and pulled ; another fluttered his wings against him and tried to crowd him in ; and a third tried to operate on his head. It was in vain ; that paaticular bird, though seemingly desirous of a bath, evidently mistrusted the temperature of the water—or his own sanitary powers of resistance in these malarial times, and he wouldn't budge. His companions, to the number of about sixty, then gave it up and crowded together in their selected position of shelter, as closely, seemingly, as swarming bees, making a pretty sight. The social and gregarious characteristics of these sparrows are strongly marked. But they fail to find, in this country, the thatched cottage roofs, and the wheat and barley ricks, in which they are so naturally prone to burrow in English rural districts.

Lord Beaconsfield and Thackeray.

Much bitterness, says a London paper, has been excited in some quarters by Lord Beaconsfield's caraciture of Thackeray, whom the great satirist's admirers profess to identify beneath the traits of St. Barbe, the journalist in "Endymion." The uncomplimentary sketch is thought to be intended as the ex-premier's revenge for Thackeray's burlesque novel of "Collingsby." The likeness in the case as in all other cases, has been purposely distorted so as to leave room for a denial by the noble author that any portrait was intended ; but everybody recognizes the original. Gushy, the rival of whom St. Barbe is always talking despairingly, is taken to be Dickens. Lord Beaconsfield has undertaken to throw people off the scent by amalgamating their characters—thus Vigo is made to be a combination of Poole, the tailor, and of Geo. Hudson, the Sunderland railway king, once omnipotent in English society, but who died in comparative obscurity some years ago. This artifice however, will not save him from severe attacks by the wrathful friends of Thackeray and Dickens.

The Cost to France of the War with Germany.

An astounding statement as to the cost of the war between France and Germany, and of the devastation caused by the Commune, has appeared in the *Economiste Francais*. The writer, M. de Foville, whose official position gives him every opportunity of testing the accuracy of the statement, considers it as being on the whole rather below than above the truth, and that £600,000,000 sterling would be near the mark. Of this the indemnity to Germany absorbs £212,000,000. If there is anything more wonderful than the statement itself, it is the rapidity with which France has recovered from this terrible infliction.

AT a negro prayer meeting, one of the bretheren earnestly prayed that they might be preserved from what he called their "upsettin' sins." "Brudder," said one of the elders, "yer hain't 'zactly got de hang ob dat ar word. It's besettin'—not upsettin'." "Brudder," replied the corrected, "ef dat's so, it's so ; but I was prayin' de Lawd ter sabe us from de sin of 'toxication, an' ef dat ain't a upsettin' sin, I dunno."

Remarkable Remedies.

(From Chambers's Journal.)

Sir Walter Scott's piper, John Bruce, spent a whole Sunday selecting 12 stones from 12 south-running streams, with the purpose that his sick master might sleep upon them and become whole. Scott was not the man to hurt the honest fellow's feelings by ridiculing the notion of such a remedy proving of avail ; so he caused Bruce to be told that the receipt was infallible ; but that it was absolutely necessary to success that the stones should be wrapped in the petticoat of a widow who had never wished to marry again ; upon learning which the Highlander renounced all hope of completing the charm. Lady Duff Gordon once gave an old Egyptian woman a powder wrapped in a fragment of the *Saturday Review*. She came again to assure her benefactress the charm was a wonderfully powerful one ; for although she had not been able to wash off all the fine writing from the paper, even that little had done her a great deal of good. She would have made an excellent subject for a Llama doctor, who, if he does not happen to have any medicine handy, writes the name of the remedy he would administer on a scrap of paper, moistens it with his mouth, rolls it up in the form of a pill, which the patient tosses down his throat. In default of paper, the name of the drug is chalked on a board, and washed off again with water, which serves as a healing draught. These easy-going practitioners might probably cite plenty of instances of the efficiency of their method. Dr. John Brown, of Edinburgh, once gave a labourer a prescription, saying : "Take that, and come back in a fortnight, when you will be well." Obedient to the injunction, the patient presented himself at the fortnight's end, with a clean tongue and a happy face. Proud of the fulfilment of his promise, Dr. Brown said : "Let me see what I gave you." "Oh," answered the man, "I took it, Doctor." "Yes. I know you did ; but where is the prescription?" "I swallowed it," was the reply. The patient had made a pill of the paper, and faith in his physician's skill had done the rest. Faith is a rare wonder-worker. Strong in the belief that every Frank is a doctor, an old Arab, who had been partially blind from birth, pestered an English traveler into giving him a seidlitz powder and some pomatum. Next day the chief declared that he could see better than he had done for 20 years.

Prince Gortschakoff.

"Among the celebrities in Baden-Baden," says a correspondent, "that I see promenading nearly every hour in the day, perhaps there is none more noted or that has a more world-wide reputation than Prince Gortschakoff, who was so long the Imperial Chancellor of Russia, and who for many years controlled a greater influence on European politics than any other man living. He also is passing into the sere and yellow leaf. He is upward of 80, and his silver locks and tottering step give evidence that he is nearly ready for the great harvester of all. Old age has unfitted him for further use or influence in the Russian Cabinet, and he is like an old war horse that has been discarded from active duty after years of hard work in his country's service. He spends the summer months in Baden-Baden and the winters in Southern France or Italy, having ignored Russia as a place of residence. Report says that his mind has become weak and childish, and that he constantly mourns over the ingratitude of his country in not reinstating him in power as in days gone by."

SOME REASONS FOR DRINKING.—An illustration of fertility of resource is recounted, we think by Dean Ramsay, in the story of the dying rustic who "speered" at the parish minister if there would be any whisky in heaven. On being rebuked for this mundane anxiety and irreverent curiosity, Sandy replied in self-excuse : "That it wasna because he wad tak ony if it were offered him, but jist in respeck that it wad look weel on the table." We have not forgotten that Highland teetotaler who was found drinking the mountain-dew at his breakfast in some wayside inn where he thought he would not be known. "Och, Donald, and we thocht ye were an abstainer!" exclaimed a Deacon who happened to look in quite unexpectedly. "And so I am," replied the detected culprit, who scorned to suggest that his beverage was only toast-and-water—"so I am ; but ye ken, my frien', I am no a bigoted ane."

Irish Titles.

The intelligent foreigner may surely be excused if he owns himself fairly bewildered and perplexed to find a key to the full meaning of half the abbreviations of titles and dignities he comes across in the newspaper any one morning in the week. But in Ireland the problem is still more vexed and involved than it is here. The habit of publishing a man's titles to distinction or respectability is carried to far greater lengths there than it is on this side of St. George's Channel ; and there must be many cabalistic letters crowded in close succession after an Irishman's name which must be wholly unintelligible to the ordinary Englishman. He can understand the meaning of J. P. and D. L., although the social position of a magistrate or a Deputy Lieutenant is not habitually advertised with us an all occasions ; but he may not that know P. L. G. stands for Poor Lady Guardian—an official of some importance in the present day in Ireland—or that T. C. is a handle that may be equally worn by a member of Trinity College, Dublin, and a Town councillor. The latter, however, would consider himself seriously ill-used if it were not given him on all occasions ; and so would a member of the Royal Irish Academy if the letters "M. R. I. A." were not always appended to his name. At a very early period Catholic clergymen adopted the letters "C. C." (Catholic Curate), and "P. P." (Parish Priest, in order to distinguish themselves from the heretical ministers of the once Established Church ; while "R. M." in Ireland does not stand for Royal Marines, but is used to separate the resident magistrate—answering to the stipendiary magistrate of our great towns—from the army of the "great unpaid." The curious depreciation of things Irish which characterizes even the "National" Irishman contributes to swell the number of these verbal puzzles, a member of the Royal College of Veterinary Surgeons of England being anxious to let every one know that he did not get his diploma in Dublin. And so this rage for some letter after the surname bites men of all ranks and all ages, and the humblest Irishman who has not been be-lettered while living may safely count on "R. I. P." being penciled on his tombstone.

Married in Defiance of the Court.

(From the London Telegraph.)

Indulgent public opinion might have recorded a unanimous verdict of acquittal in the case of the audacious young man who took upon himself to run away with and marry a ward in Chancery, had it not been for the very reprehensible course he thought fit to adopt in misrepresenting the young lady's age to the clergyman who sealed the nuptial bond. She was 22, he averred, whereas she turned out to be only 19 ; and, to add to the enormity of his offense, he further represented himself to have slept for three weeks in a parish which he had, as a fact, only honoured by a perfunctory sojourn of a single night. As Vice-Chancellor Malins pointed out, there is a lamentable laxity about a system which enables two romantic young people, neither of them past legal infancy, to get married by making false declarations of age, with no further questions asked. In the case of Mr. Metzgar, who perpetrated this particular fraud upon the cleric, he had been previously prohibited by the Court of Chancery from holding any communication whatever with the object of his affections ; so when he deliberately carried her off and married her, his conduct may have had a touch of romance about it, but it was quite certain to receive punishment. The marriage is now valid, but the unfortunate bridegroom is in prison, a victim to the offended dignity of the Court of Chancery and only after a period of jail discipline and the humblest apologies is there any chance of his being liberated. It is quite right that the Chancery Judges should keep a very sharp eye on the doings of infants, as they are the official guardians of all minors in the country, as well as those who, by virtue of their fortunes, are in the peculiar condition of "Wards of Court ;" but it may be hoped that the amorours desperation which has landed the unfortunate bridegroom in a jail will carry him cheerfully through his confinement, and restore him afterward—a wiser, if a sadder man—to the society of his ill-won bride.

IT is the confession of a widower who has been thrice married that the first wife cures a man's romance ; the second teaches him humility ; the third makes him a philosopher.

The Knight of Ravenscrag.

The "The Celebrity at Home" Sketch of Sir Hugh Allan.

James street, Liverpool, the broad thoroughfare leading from St. George's Church to the docks, is a street among streets. From earliest dawn lorries laden with huge bales of cotton or larger hogsheads of sugar, light carts with their Irish drivers indispensable to the seaport but the terror of its inhabitants, and the four-wheeler with Jack ashore, and "his cousins and his aunts" toil up, or rather down, it. On the one side are grim and many-storied warehouses; on the other less impressive hostleries much affected by master mariners. Of the former, the central and principal building presents the facade of an Italian palace pierced with five windows on either side of the granite pillared entrance. This is the counting house of the "Allan Line," a name as familiar in Liverpool as the landing stage or the Town Hall, and to the Canadian more than a household word, since it represents the link that binds the Dominion to the Mother Country. And it is something more than name. Modest in its origin, starting with two vessels only, and at one time threatened with extinction through unparallelled misfortune. The Allan Line of steamships rivals in importance the Cunard or the Peninsuiar and Oriental, and differs from these companies in being the largest and finest fleet that is retained in private hands. It belongs entirely to the firm of Allan Brothers & Co., and has feeders in its completement of sailing clippers, and in the connecting lines of railways and of lake navigaiton, the control of which centres in the same hands. It possesses, too, a reputation for comfort and safety which induces many travellers to give it the preference as a route to the States. Its aim, however, is to benefit the Dominion, and thus it comes about that the names of Canada and the Allan Line are inseparable.

This vast carrying trade, like all other successful enterprises, has one directing genius. A man who does not obtrude himself on the public, yet unmistakably a man in a thousand and a man of the times, is Sir Hugh Allan, the founder of the line, and the head of the firm. He is at once the richest and most influential citizens of his adopted country, for Sir Hugh is, of course, a Scotchman, typically sagacious and indomitable. Within a year of the allotted span there is about him the unmistakable air of power. Age has scarcely impaired the elasticity and vigour of the massive frame; it has but emphasized the resolution expressed in the lines of the face. Physical power and mental capacity—this is the combination, rare as it is admirable.

Like all men who have seen the world, Sir Huge is a practical cosmopolitan, as much at his ease in the Grand Hotel at Charing Cross, or in the Liverpool offices, as in the streets of Montreal, and thinking as little of a run across the Atlantic as a Londoner does of a trip to Brighton. Nevertheless there is something in the tone of the greeting which meets you on the broad terrace overlooking the mighty St. Lawrence that says unmistakably, "Here I am at home."

"Ravenscrag," a massive pile of roughly hewn granite, rises boldly from the side of the Royal Mountain which gives the city its name. The walls are of enormous thickness, and well calculated to withstand the extremes of temperature incidental to the climate. Its twelve acres of garden and shrubbery are surrounded by the celebrated Park of Montreal. The view from the terrace can scarcely be surpassed. At your feet lies the city, with its trees, shaded avennes, and streets, its handsome public buildings and innumerable spires. Beyond it flows the great river, here two miles wide, crowded with shipping of all nationalities, and spanned by the world-renowned Victoria bridge; whilst the fertile plains of Vermont stretch away to the distant horizon. Within the house a suite of drawing-rooms leads through a noble ball-room to extensive conservatories in which it is easy even in the depth of a Canadian winter to imagine oneself in the tropics. The great central chamber with its parquet floor of native woods is often the scene of triumphs in dress, beauty, and flirtation. It is the boast of the colony that the "Blue noses," as some would call them, or the Dominion belles as they are properly named—for the former term is rather local than generic—are the best looking women in the world.

But the library, with its dark, solid furniture, large open fireplace, and prevading air of quiet comfort, is the room of the house. Here, after the day's toil, Sir Hugh spends a couple of hours in relaxation, a game of whist with some of the members of his family—his children number a round dozen—or with the chance visitor. It is, too, the scene of work as well as play, for it has been for years Sir Hugh's invariably custom to return to his sanctum when the household has retired for some hours of steady, hard work, writing reports for some of the numerous companies over which he presides, scrutinizing the statements of managers, or sketching the possibilities of some new enterprise. To a man of his calibre, who is the motive power in everything with which he is connected, such labour is enjoyment only to be eclipsed by his delight in exploring some unknown bay, or in speeding on his yacht through the blue waves of Lake Magog.

"Belmere," the country house used by the family during the hot summer months, is on the edge of this sheet of water—one of the prettiest on the continent—the mountains rising around it to the height of four thousand feet, its surface lively with minature flotillas of steam and sailing yachts, canoes and boats in constant demand for acquatic diversions. It was here that Sir Hugh received the Duke of Connaught when His Royal Highness was with his regiment in Canada. The lake, which is thirty miles in length, is neutral ground, lying partly in the Dominion and partly in the States, the boundary line running across its centre.

As a host Sir Hugh is cordial without elusion. He has his peculiarities which, however, are not allowed to interfere with the comfort of his guests. He has never smoked, he has wisely eschewed spirits altogether until quite recently, when he has been obliged to take a little for his health's sake. Fond of cards, he has never risked more than a shilling on any game of chance in his life. Yet he spends his money with an open hand, and is generous and discreet in gifts. He possesses in a remarkable degree the faculty of throwing off all business cares when his work is done, and avows that even in the most harrassing times he has never allowed mental worry to rob him of an hour's sleep. His conversation aims at being sensible rather than brilliant. One who has seen and done much cannot speak without speaking well. There is a charm, too, in his manly accents which only reach enthusiasm when, Colonist to the backbone as he is, he talks of "the land of brown heath and shaggy wood."

When on the first of May, fifty-four years ago, the self-possessed Ayshire lad stood on the deck of the vessel which was towed to the bank—in those days Montreal did not possess a wharf—by a small tug aided by a team of oxen, he had no prevision that he was to be the chief agent in making the spot prosperous and busy. He had no thought of the great warehouses and steamships, the crowded wharves, all his own, which have grown up as if by enchantment. The lad's ambition rose no higher than to own a ship and command it, as his father had done before him. Yet his career was fixed. He was destined to create, and to maintain what he created. Difficulty could not deter him. He accepted what work he could get, and stayed in the new country until he was of age; then he came home and arranged with his brothers a plan of concerted operations. With this end in view he returned to his adopted home, became a clerk in a shipping-house, rose to be a partner, and then started for himself as a ship-owner and ship-builder. After several unsuccessful attempts to interest the Government on the project, Mr. Allan's firm at length obtained the contract for a line of steamers between Great Britain and Canada, and the "Allan Line" spraug into existgnce. At one time it appeared as though fate were against them. Ship after ship was wrecked. His brothers lost heart, but not so Sir Hugh himself. "Providence," he affirmed, "has not a special grudge against any honest enterprise, nor does it show it by bringing destruction upon innocent people. The fault is in ourselves in some disregard of nature's law. It is we who must find out what's amiss, and set it right." And he set to work. He traced the cause to the navigation at a high rate of speed of a dangerous gulf only partially surveyed and badly lighted. He induced the Government to grant an extension of the time for the performance of the voyage, and the danger disappeared, the "Allan Line" being to-day as celebrated for its safety as for its regularity.

But Sir Hugh Allan has not been content with success in the home sphere of business. Enterprises of all kinds connected with the colony receive his support, and are directed by his experience. Besides owning the principal share in his trans-Atlantic fleet, he is the President and chief shareholder of the Richelieu and Ontario Navigation Company, and practically the sole proprietor of the Halifax and Cape Breton Railway, constructed at a cost of nearly a million sterling, and of the greater part of the coal fields of Nova Scotia. He is founder and president of the Montreel Telegraph Co., and founder and a director of the Merchants' Bank of Canada; one of the largest shareholders in the Pullman Palace Car Company, and director of any number of other companies, including insurance, cotton, woolen, and rolling mills, India rubber and tobacco manufactories, and the owner of gold, silver, and copper mines.

But though he might rightly be called the greatest all-round merchant in the world, Sir Hugh's chief claim to public confidence is his absolute indentification of his own interest with those of the Dominion. The one passport necessary to obtain a hearing from him is the statement that the proposal intends to benefit his adopted country. He has provided Montreal with a theatre, a magnificent concert hall, and assembly rooms. He has done more for the material progress of Canada than any other ten men. There is not an industry in the couuntry to which he has not at one time or another lent both brains and capital, often when the prospects of a return have been remote, and of all his immense fortune not a penny is invested outside the Dominion except in enterprises intimately connected with it. Throughout his long career, far from abusing the enormous trusts imposed upon him, he has rigidly set his face against wire-pulling or speculation on the part of his fellow-directors. He has never let any petty or personal desire interfere with what he considers his duty. He marks out his course and follows it with little, perhaps too little, regard for the opinion of the public—for an attitude of the kind is not conciliatory, and in putting down incipient commercial wrong-doing with a strong hand he has not failed to make enemies, ever afterwards anxious to spy a crevice in the proof armour of his honesty.

But it is not necessary, for the justness of his action is now universally recognized. His massive intellect, his massive business capanity, and his iron will have ever been at the service of his fellow-citizens, and they know it. In his success he invites comparison with the great millionaires of the neighbouring States, but with this difference, it has been gradual and steady, and independent of lucky hits or ingenious concerning. He is in this way an admirable representative British colonist of whom the Yankees themselves would say, "If any man living can beat his record send him along."

Snow Bound on the Plains.

TRAVELLERS CAUGHT IN THE FIERCEST OCTOBER STORM EVER KNOWN IN NEBRASKA.

(From the Worcester Spy).

We pitched our tents carelessly, intending to take an early start the next morning. But, alas, for our expectations! During the night a strong wind set in from the northwest, and about 4 A.M. it began to snow. None of us could judge well of weather indications in Nebraska, and our guide did not suspect anything serious, for the oldest inhabitant could not expect a blizzard in October, and it was now only the 15th of the month. The guide thought, and the drivers believed, that the storm would cease at 12 M., and we, of course, trusted to their judgment. But, instead, the storm grew fiercer, the snow fell more aapidly, and the northwest gale increased in fury. Before night so much snow had fallen that if it had lain as it fell it would have been at least one foot deep, but now it had been piled into drifts so that our mules stood with their feet nearly as high as the wagon tops, and the stove and furniture in our cook's tent were completely hidden from view.

The night shut in upon us gloomy and awful. We had two light canvas tents, in each of which slept four men, with just blankets enough to keep them comfortable in ordinary weather. But now we must provide for the guide, two drivers, and a porter, who had usually slept in the wagons, and, as they were slimly provided with clothing, we must share our stock with them. There was but little sleep in the tent that night, the cold was intense, and the wind was so terrible in its effects that we feared every moment the larger tent would fail, though we had strengthened it by cords in every conceivable way. With the morning light it seemed as if all the spirits of the air were let loose, and all day long the storm roared with ever-increasing fury. The snow had so beaten in that when we awoke we found ourselves buried beneath it, and now we were obliged to gather all our bedding into the middle of the tent to keep it from being wet through. No man could long endure the storm outside, and we stood huddled together from morning till night, stamping our feet to keep from suffering. Even then we could not keep comfortable. For hours together we stood with our backs braced up against the tent to keep it from giving way under the great weight of the snow and the terrific force of the gale. I know of no language which can be used to convey to any person inexperienced in such a time any adequate conception of the fury of the storm. During the second day we succeeded in digging our little stove out of the snowdrift, and, setting it at the entrance of our tent, we managed to keep a little fire through the rest of the day and night. But our store of wood was very small, and there was no more to be had within we knew not how many miles. The other tent's company had no stove and no fire. During the second night of the storm it was impossible that all should sleep at once, even if they could sleep despite the cold, for what with the stove on one side and all our provisions brought in from the wagons on the other, there was not room for all to lie down. Besides, it was necessary to keep the fire going lest we might all perish together. So we stood bending over the stove all night, two at a time, while the others tried to sleep. It was an awful night. To add to our anxiety, the guide and drivers declared that the horses and mules were likely to perish. They were a pitiful sight, indeed. Two of them had no blankets, and the others were little better off. At times it was difficult to conceive that the creatures before us were horses, so literally covered were they with a coating of ice. After two days and two nights the storm ceased.

It was now Sunday morning. We knew not where we were, and we doubted if the guide had more definite knowledge than we. Every man was desperate. Some declared it dangerous to attempt to move through the snow, and that our only safe course was to remain, and in case of necessity, use the wagons for fuel and the horses for food. Others declared their purpose to move at all hazards, and without delay. Finally we determined to move. We threw away all luggage that could be dispensed with, and in grim silence started in the direction which we thought would bring us to the nearest hut. It was difficult travelling through the drifted snow, and it was bitterly cold. But all day long we pushed on, never stopping to feed a horse, breaking through the drifts with our ponies so that the teams could low, till about 5 p. m., when we came in sight of haystacks, in the vicinity of which we knew there must be a ranchman's hut. I never saw a happier set of men than were these when it became certain that what they saw were haystacks, and not the terrible sand hills which had so often deceived us during the day. Grave men, merchants of Worcester, swung their hats aloft and shouted for joy. It had been a march for life.

The Utilizing of the Tides.

A Philadelphia engineer has invented, it is claimed, a machine by which the power of the tides can be utilized. Numerous plans have been proposed for the accomplishment of this most desirable end, but only under exceptional conditions have they been practical or economical. If the new device can harness the tide in an open channel, so as to convert any considerable portion of the vast power into working force, the inventor will rank among the great benefactors of humanity. Emerson says somewhere: Hitch your wagon to a star. A device for utilizing mechanically the free tides, as they sweep along our shores, would come next to that, since it would enable us, through converters and carriers of electricity, to hitch our wagons to the sun and moon.

An exchange says: "Streams all over the country are running dry." This a a canard. When a stream is dry it can't run."

A Hamilton man with an ingrowing nail, chopped his toe off. This remedy never fails. For sale at all hardware stores. Beware of imitations.

MICHIGAN SAW MILLS.

The following items will show what our neighbors in Michigan have been doing last season :—

William Buckley, Chase, has cut 1,000,000 feet.

C. R. Twichell, Maple Hill, made 17,822 shingles.

J. E. White, Pentwater, reports 3,000,000 shingles.

J. & J. Ratz, Reed City, report a cut of 800,000 feet.

Closson & Gilbert, Manton, have cut 3,800,000 feet.

John Beardon, Midland, has made 6,000,000 shingles.

J. M. Weatherwax, Stanton, reports 4,750,000 feet.

Henry Stephens & Co., St. Helens, have cut 7,000,000 feet.

M. S. Lockerly, Sand Lake, has made 8,000,000 shingles.

J. R. Borst's mill, Cedar Springs, has cut 13,500,000 shingles.

E. A. Foster & Co., Ludington, turned out 20,864,000 shingles.

Morris & Richards, Breckenridge, have cut 800,000 shingles,

R. Peacock, Bay de Noquette, has cut 5,000,000 feet of lumber.

E. S. Briggs & Brother, Vicksburg, report 185,000 feet of hardwood.

E. Shay, Haring, reports 5,000,000 feet cut, and all of it on hand.

J. H. Nyman, Bangor, who does custom work, has cut 100,000 feet.

J. Miller Raub's mill, Chase, has turned out 2,000,000 feet of lumber.

Taber & Hopkins, Rockford, cut 1,700,000 feet of lumber, 300,000 pickets.

Ramsay & Jones' mill, Menominee, has cut 9,000,000 feet, 1,800,000 lath.

J. E. Nelson, Cedar Springs, has cut 1,000,000 feet, 14,500,000 shingles.

C. Pelton, Cedar Springs, cut 9,000,000 shingles, and has 300,000 on hand.

A. B. Wiser, Birch Run, has cut 840,000 shingles, and has 18,000 on hand.

J. &. F. L. Post's mill, built the past fall at Clare, has cut 500,000 shingles,

F. W. Gilchrist, Alpena, has cut 15,000,000 feet of lumber, 3,594,000 lath.

Baker & Murray, Big Rapids, have cut 4,000,000 feet, and 8,000,000 shingles.

A. K. Moyer & Co., Cadillac, report 10,000,000 feet, with 7,000,000 on hand.

Dewy & Stewart, Owassa, cut 7,500 feet of pine and 31,000 feet of hardwood.

William Steinberg, Twin Lake, 1,400,000 feet of pine and 50,000 feet of hardwood.

Bond & Keysor, Bond's Mills, have cut 9,500,000 feet of lumber and 380,000 lath.

W. Young & Co., Cheboygan, have cut 1,500,000 feet, and have 1,000,000 on hand.

F. & E. Haertel, Centralia, have cut 100,000 feet of hardwood and 3,000,000 shingles.

Cobbs & Mitchell, Cadillac, report 14,718,836 feet of lumber and 500,000 bed slats.

C. W. Dunning & Co., Twin Lake, have cut 700,000 feet of lumber and 80,000 shingles.

Oliver, Belknap & Green, Greenville, report 3,000,000 feet of lumber and 200,000 lath.

William Broadwell, Bangor, has cut 1,200,000 feet of hardwood, and has 200,000 on hand.

J. W. Young, Farewell, has cut 7,000,000 feet of pine and has 2,000,000 foet on hand.

Morris & Stebbins, Mears, have cut 6,000,000 shingles and have 250,000 on hand.

C. H. Forman, Forman, has cut 3,000,000 feet of lumber, 500,000 feet on hand.

Gerrish & Diggins, Hersey, have made 21,350,000 shingles, 2,000,000 of which are on hand.

A Gilbert, Stanton, has cut 680,000 feet of fumber and has 250,000 feet of it on hand.

C. N. Storrs, Muskegon, has cut 9,000,000 feet of pine and 1,000,000 feet of hardwood.

F. S. Farr, Muskegon, cut 28,000,000 feet of lumber, 4,300,000 lath and 1,022,000 pickets.

D. W. Lewis & Co., Manistee, have cut 100,000 feet, 20,000 on hand, and 35,000,000 shingles.

A. B. Long & Son, Grand Rapids, have cut 11,000,000 feet of lumber, 4,500,000 shingles.

C. H. Hackley & Co., Muskegon, report 30,173,962 feet cut, 8,000,000 lath, 35,000 pickets.

James Gibson, Fremont Center, has cut 125,000 sets of heading and 5,000,000 shingles.

L. H. Withey & Co., Grand Rapids, have cut 4,000,000 feet, and have 2,700,000 feet on hand.

Smith & Field, Spring Lake, have cut 3,000,000 feet of pine and 100,000 feet of hardwood.

F. N. Wright & Co., Greenville, have cut 3,000,000 feet of lumber, 3,000,000 shingles, 1,500,000.

George J. Quimby, Grand Rapids, has cut 1,500,000 feet of lumber, and has on hand 600,000 feet.

C. C. Comstock, Grand Rapids, has cut 7,500,000 feet of lumber, and has 3,000,000 feet on hand.

C. A. Hawley, Shelby, has cut 1,200,000 feet of hardwood, and has 100,000 feet of it on hand.

Geo. N. Lee, Delta, manufacturer of handles and oars, has cut 600,000 feet of hardwood.

McCoy & Ayer, Cadillac, cut 10,000,000 feet, 4,500,000 on hand ; 926,550 lath, 450,000 on hand.

Charles Beaudry & Co., Muskegon, cut 13,000,000 feet of lumber, 1,600,000 lath and 400,000 pickets.

W. H. Biglow & Co., Muskegon, have cut 14,702,000 feet of lumber, 15,000,000 lath, 160,000 pickets.

Swan, White & Smith, Muskegon, cut 21,000 0f0 feet of lumber, 3,250,000 lath and 116,000 pickets.

R. Whitman, James Redmond, agent, Stanton, has cut 3,000,000 feet of lumber, all of it on hand.

Herbert, Thomas & Co., Chase, have cut 2,500,000 feet of lumber, nearly all of which is on hand.

Freed Brothers, Stanton, report 100,000 feet cut, 20,000 on hand ; 5,000,000 shingles 400,000 on hand.

W. Bishop, Shiloh, has cut 1,000,000 feet of pine, 300,000 of hardwood, and has 100,000 feet on hand.

G. A. Wagnar, Mears, reports 2,500,000 feet of pine, 500,000 feet of hardwood and 4,000,000 shingles.

W. H. & E. K. Potter, Alpena, report 10,000,000 feet of lumber, 10,000,000 shingles, 2,000,000 lath.

D. D. Davie Trufant, has cut 300,000 feet of pine, 100,000 feet of hardwood and 3,500,000 shingles.

A. C. Fisher & Son, Coral, report 1,000,000 feet of pine, 50,000 feet of hardwood and 50,000 shingles.

N. A. Cobb, Ashton, has cut 600,000 feet of pine, 100,000 feet of hardwood, and has 150,000 feet on hand.

Higbee & Hugh, Morley, have cut 2,500,000 feet of pine, 200,000 feet of hardwood, and 150,000 shingles.

W. H. Thompson, Kalkaska, has cut 4,500 000 feet of lumber, 1,500,000 on hand, and 500,000 shingles.

F. G. Kendric, Birch Run, has cut 902,786 feet of pine, 104,742 feet of hardwood and 500,000 shingles.

The Pere Marquette Lumber Company, Ludington, report 9,056,664 feet cut, and 4,000,000 feet on hand.

Wilson Brothers & Miller, Evart, report 200,000 feet of pine, 25,000 feet of hardwood and 200,000 shingles.

White Brothers & Co., Colby, report 1,200,000 feet of pine, 50,000 feet of hardwood and 1,400,000 shingles.

Sawyer, Goodman & Co., Menominee, report 4,200,000 feet of lumber, 4,800,000 shingles and 402,000 lath.

Bennett & Barnard, Colwell, have cut 8,000,000 feet of pine, 50,000 feet of hardwood and 3,000,000 lath.

A. V. Mann & Co., Muskegon, has cut 23,372,185 feet, 3,627,600 on hand ; 6,221,000 pickets, 880,400 on hand.

Charles Mears, Whitehall, has cut 800,000 feet of pine, 500,000 feet of hardwood, and has 800,000 feet on hand.

J. S. Minor, Alcona, have cut 12,500,000 feet of lumber, 1,250,000 on hand ; 2,200,000 lath, 350,000 on hand

H. D. Churchill, Alpena, has cut 12 755,675 feet of lumber, 3,550,000 on hand ; 4,045,550 lath, 425,000 on hand.

E. P. Hayes, Woodville, has cut 5,000,000 feet, 2,000,000 on hand ; 9,000,000 shingles, 250,000 on hand.

G. L. Dean, Sheridan, has cut 500,000 feet of pine, 100,000 feet of hardwood, and has 150,000 feet on hand.

Hannah, Lay & Co.'s mill, Traverse City, has made a cut of 18,183,400 feet, of which 7,000,000 are in the yard.

James Gowen, Gowen, has cut 3,000,000 feet of lumber, 3,500,000 on hand, 725,000 shingles, 250,000 on hand.

Smith Brothers, Cheboygan, have cut 6,673,653 feet of lumber, 1,250,375 shingles, 2,070,950 lath, 940 pickets.

Henry Stephens' mills, at Stephens, have cut 25,000,000 feet of lumber, 5,000,000 shingles and 5,000 000 lath.

George E. Dewey, Shelby, has cut 80,000 feet of pine and 338,000 feet of hardwood. He has 50,000 feet on hand.

The Stronach, Lumber Company have cut 11,300,000 feet of pine, 75,000 feet of hardwood and 268,000 shingles.

George W. Roby & Co., Ludington, have cut 17,586,832 feet of pine, 50,000 feet of hardwood and 2,693,050 lath.

W. Batcheler, Grand Haven, has cut at his mill, at Spring lake, 7,000,000 feet, 5,000,000 of which is on hand.

Bellows Brothers' mill, Frankfort, closed down with a cut of 1,300,000 feet of pine and 200,000 feet of hardwood.

Sands & Maxwell, Pentwater, have cut 5,000,000 feet of pine, 2,000,000 feet of hardwood, and 15,000.000 shingles.

R. W. Bellamy & Co., Hersey, cut 1,000,000 feet of pine, 500,000 feet of hardwood, and have 100,000 feet on hand.

Raymond & Duming's mill, Evart, cut 500,000 shingles. The mill burned Sept. 7, and will not be rebuilt at that point.

George N. Stray, trustee, Ludington, informs us that his mill has cut 19,183,801 feet, and he has 500,000 feet on hand.

Covell, Ocobock & Co.'s shingle-mill, Whitehall, Mich., has cut 28,245,000 shingles, and there are 3,000,000 on hand.

Johnson & Link, Cedar Springs, have cut 3,000,000 feet of pine, 200,000 feet of hardwood, 1,000,000 lath and 5,000 pickets.

Hartt, Ware & Horning, Woodville, have cut 8,000,000 feet, 3,500,000 on hand. They have also at their mill 1,000,000 lath.

James Campbell, Westwood, reports 1,200,000 feet of pine, 250,000 feet of hardwood, 300,000 shingles and 250,000 lath.

The Deer Lake Company, Ishpeming, have cut 2,780,976 feet of lumber, 524,000 shingles, 199,000 lath and 30,000 pickets.

Thomas R. Lyon, agent, Ludington, has cut at one of his mills 22,000,000 feet of lumber, 6,850,000 shingles and 155,000 lath.

Ruddock, Palmeter & Co., Manistee, have cut 17,650,133 feet of lumber, 9,033 000 shingles, 4,590,650 lath and 44,519 pickets.

The Beidler Manufacturing Company, Muskegon, have a record of 22,800,000 feet of lumber, 7,164,000 lath, 35,000,000 pickets.

George Hannahs, South Haven, has cut 3,000,000 feet of pine, 245,000 feet of hardwood, 1,000,000 shingles and 300,000 pickets.

Henry Stowe, Orono, cut 500,000 feet of lumber and 5,000.000 shingles. On hand, 150,000 feet of lumber and 2,000,000 shingles.

William Bakker & Son, Grand Haven, report 6,000,000 feet cut, and 2,000,000 on hand. Also, 100,000 pickets, and 50,000 on hand.

The Chicago Lumbering Company, Manistique, have cut 17,000,000 feet of lumber, 1,500,000 shingles, 3,000,000 lath and 225,000 pickets.

Cartier & Filer, Ludington, have cut 14,000,000 feet of lumber and and have 500,000 feet on hand. They have also cut 1,500,000 shingles.

Parmelee & Tremain, Lodi, report 400,000 feet, 60,000 on hand, and 50,000 shingles. The capacity of the mill will be increased.

The Wagar Lumber Company, Colby, have cut 2,000,000 feet of lumber and 6,000,000 lath. On hand, 500,000, feet of lumber and 1,000,000 lath.

Blodgett & Byrne, Holton, have cut 4,000,000 feet of pine, 300,000 feet of hardwood and 3,000,000 shingles. On hand, 2,500,000 feet.

Butterfield & Crable, Alpena, report 11,000,000 feet, 2,000,000 on hand ; 4,500,000 lath, 700,000 on hand ; 85,000 pickets, 60,000 on hand.

E. T. Merrill, Ashton, cut 200,000 feet of lumber, all on hand. One clapboard machine will be added to the machinery the coming season.

Judson D. Smith, Cheboygan, has cut 11,000,000 feet of lumber, 500,000 lath. At Rogers City, Mr. Smith has cut 2,400,000 feet of lumber.

L. Van Winkle, Farwell, has cut 4,000,000 feet of lumber and 3,000,000 shingles. He has 1,500,000 feet of lumber and 400,000 shingles on hand.

Hileman, Hesser & Co., Trufant, have cut 7,500,000 feet, 4 000,000 on hand ; 9,000,000 shingles, 2,500,000 on hand ; 2,500,000 lath, 1,000,000 on hand.

S. H. Gray & Co., Big Rapids, have made 12,000,000 shingles and have 1,000,000 on hand. The capacity of the mill will be doubled this winter.

E. W. Bond & Son, Fife Lake, have cut 7,000,000 feet of lumber and 400,000 lath. They have 4,000,000 feet of lumber and 200,000 lath on hand.

A J. Summerville & Co., Chase, have cut 3,000,000 feet of lumber, 200,000 shingles and 150,000 lath. They have on hand 1,500,000 feet of lumber.

Begole, Fox & Co., Flint, report 6,500,000 feet of lumber, 1,200,000 shingles and 900,000 lath. On hand, 6,000,000 feet of lumber and 500,000 lath.

The Stanton Lumber Company, Colby, have cut 10,000,000 feet of lumber and 7,000,000 lath. On hand, 7,000,000 feet of lumber and 1,000,000 lath.

James W. Willett, Stanton, reports 3,000,000 feet of pine and 30,000 feet of hardwood. He has on hand 5,000,000 feet of lumber and 10,000 pickets.

Nickerson & Collester, Pentwater, have cut 800,000 feet of pine, 2,500,000 of hardwood and 2,500,000 shingles. They have 100,000 feet of lumber on hand.

William Rutherford & Co., Muskegon, report 20,287,122 feet of lumber, 900,000 feet on hand ; 5,776,000 lath, 510,000 on hand ; 208,250 pickets, 1,350 on hand.

A. G. Butler's mill, Frankfort, has cut 12,593,090 feet in a run of 152 days. He has another mill with a capacity of 6,000,000 feet, which has cut 4,760,480 feet.

The N. Ludington Company's mill at Escanaba, has cut 6,198,000 feet, and have 1,000,000 feet on hand. The mill has also cut 1,000,000 lath, and 125,000 pickets.

Charles L. Gray & Co., Evart, have cut 2,000,000 feet of pine, 200,000 feet of hardwood and 6,000,000 shingles. On hand, 200,000 feet of lumber and 200,000, shingles.

Munroe, Boyce & Co., Grand Haven, have cut 7,000,000 feet of lumber, 4,500,000 on hand ; 800,000 lath, one-half of them on hand ; 320,000 pickets, all of them on hand.

G. F. Case's mill, Stanton, has cut 3,000,000 feet, 1,000,000 on hand ; 3,000,000 shingles, 400,000 on hand ; 500,000 lath, 100,000 on hand ; 50,000 pickets, 10,000 on hand.

F. W. Read & Co., Eagle Mills, report 3,000,000 feet, 200,000 on hand ; 945,000 shingles, 107,000 on hand ; 559,000 lath, 37,000 on hand ; 29,257 pickets, 63,000 on hand.

A. J. & C. E. Covell, Whitehall, have cut 10,900,000 feet of lumber, 2,200,000 lath and 100,000 pickets. On hand, 1,765,000 feet of lumber, 100,000 lath and 40,000 pickets.

W. C. Culbertson, Menominee, has cut 9,000,000 feet of lumber, 1,500,000 lath and 100,000 pickets. He has 5,000,000 feet of lumber on hand, 500,000 lath and 10,000 pickets.

Staples & Covell, Whitehall, have cut 11,800,000 feet of pine, 200,000 feet of hardwood and 2,500,000 lath. They have in their yard 1,000,000 feet of lumber and 200,000 lath.

The Kirby-Carpenter Company, Menominee, have sawed 50,570,169 feet of lumber, 5,049,00 lath, 377,997 pickets, and have now on hand 1,802,039 feet of lumber, 886,000 lath and 215,080 pickets.

The Sextus N. Wilcox company, White Cloud, have cut 16,000,000 feet of pine, 20,000 feet of hardwood, 2,400,000 lath and 68,000 pickets. On hand 9,700,000 feet of lumber, 600,000 lath and 68,000, pickets.

Walworth & Reed, Cedar Springs, have cut 9,000,000, 3,000,000 feet on hand; 5,000,000 shingles, 1,500,000 lath, 350,000 on hand; 150,000 pichets, 30,000 on hand The Mill has been removed to Montague.

Rich Brothers, Ontonagon, cut 4,000,000 feet of lumber, 1,500 000 feet on hand; 6,000,000 shingles, 250,000 on hand, and 10,000 pickets. The mill was burned October 4, and it now being replaced by one of double its capacfty.

O. R. Johnson & Co., Douglass, have cut 1,200,000 feet of pine, 70,000 feet of hardwood and 881,000 shingles. The same firm's mill, at Saugatuck, has cut 4,850,000 feet of pine, 1,350,000 feet of hardwood, 2,500,000 shingles and 17,000 lath.

C. Mears & Co.'s Duck Lake, mill cut 320,700 feet of pine and 399,162 feet of hardwood. Their Silver Lake mill cut 1,905,951 feet of pine and 61,377 feet of hardwood, and their Lincoln mill, 1,046,871 feet of pine, 140,501 feet of hardwood, 268,000 shingles and 155,400 lath.

The Nipissing District.

Some time since we referred to the development of the Nipissing district by the building of a propeller by A. P. Cockburn, Esq., M. P., to run on Lake Nipissing next season. The proposed steamer, the "Inter-Ocean," is expected to be ready to make a trial trip by the end of June next. The workmen to be engaged in constructing the steamer left Muskoka, by way of Rosseau, about the middle of last December. A correspondent, recently writing, says:—"Owing to the difficulties of communication all the settlers in the Nipissing District so far have settled on the south side of the lake; and there is actually only one man, with his wife and child, living in all the vast expanse of territory north of its waters. The establishment of short colonization roads running north and south from the lake; the navigation of the Stugeon river and other tributaries of the Nipissing by the 'Inter-Ocean'; the daily arrival of trains at Callender, and the construction of the Sault Branch Railroad, will give a wonderful impetus to the settlement of the country. As demonstrating that the winters in the Nipissing District are not of necessity more severe than those in Muskoka, the fact is communicated that although last week there were about two feet of snow at Bracebridge, there were only three inches at Lake Nipissing. The most recent surveys confirm every statement as to the fertility and suitableness of a large proportion of that country for settlement by agriculturists. A map carefully corrected by field notes, and issued within the past few weeks by the Crown Lands Department at Toronto, shows that in the townships south of the lake and French River 95 per cent of the land is arable, and well wooded with birch, white oak, hemlock and balsam. It may be mentioned that the want of a steamer has been much felt by lumbermen in this district during the past year. It is not expected that the enterprise will be immediately successful from a pecuniary point of view, but there is such confidence in the future of that District that a Lake Nipissing Navigation Company will before long be formed."

Kinmount News.

Mr. Jabez Thurston, of Lindsay, had a practical engineer here a few days ago trying to purchase three acres of land of Mr. J. W. Gilmour, for a large steam mill here.

Several American gentlemen are now negociating with Mr. J. Crego, to purchase sites here for steam mills. We expect to have over eight or nine steam mills here soon.

Mr. M. Chase, who is a partner with John Dovey here at our new mill, is engaged in moving a 75 horse-power-boiler to the mill. The boiler contains 179 flues. It is the largest boiler which ever came to this locality. The mill is now enclosed and there are over 20 men to work at it daily. The mill is expected to start work in 14 days,—cutting boards and shingles for the American market.

Messrs. Paxton and Jones are now gettin out square timber and saw logs to build a large frame boarding house, 40 by 80. This house will be under the care of Thos. Baker,—who keeps the other boarding house at the iron mines.

New Processes in Milling.

All the Minnesota millers are now fighting the old-fashioned flour barrels. They say it is a relic of barbarism. They desire to substitute the cotton sack in its place. Cotton sacks holding a half-barrel of flour are worth ten cents apiece. Flour barrels are worth forty-five cents each. All the flour shipped to Glasgow and Rotterdam goes in cotton sacks. These sacks are worth as much there as here. The millers maintain that flour does not sift through a good cotton bag as much as it sifts through a barrel. Ten bags of flour were shipped to Glasgow, returned to Minneapolis, and sent again to Glasgow. When weighed they had actually gained in weight. Six hundred barrels of flour put up in bags and shipped to Glasgow will gain in weight one thousand eight hundred pounds. When New York flour dealers begin to handle flour in half barrel sacks, the people will save twenty-five cents on a barrel and have their good sacks left.

The old millstones are all being taken out and new steel rollers are substituted in their places. The wheat passes through five sets of rollers, each set closer than the former. These rollers are thirty inches long and ten inches in diameter. After passing between each set of rollers it is "bolted" or sifted through the cloth. The last rollers are hardly anything but wheat hulls and the waxy germs which do not crack up, but smash together. So flour is now cracked and disintegrated without grinding. The first rollers crack the kernels of wheat into say six pieces. The starchy substance which rattles out drops through the cloth sieves or bolting cloth. These six pieces are broken between the next rollers in thirty-six pieces. Then the white starch crumbs are sifted out again, and the thirty-six pieces are passed between still tighter rollers, which crack them into 216 pieces; another set of rollers multiply each of these particles into six more, making them aggregate 1296. Another set of rollers screwed together with tremendous pressure makes 7776 pieces. The scientific miller says a grain of wheat is finally cracked into 7776 pieces without being ground at all. This is the Hungarian process. The germ of a kernel of wheat is a waxy substance not fit to eat. Between stones this germ grinds into the flour and damages it. By this new process of the Hungarian rollers this germ is flattened out, and it is bolted out. However, it is finally ground up with the debris on stones to make the low grade flour, which we sell in Rotterdam for $2.50 per barrel.

ST. LAWRENCE LUMBER TRADE.—The figures relating to the lumber trade of the St. Lawrence with South American ports, for the season just closed, have been published. They show that the total shipments of sawn lumber were 10,286,184 feet, four-fifths of which quantity was sent from Montreal. It was expected that a heavier business would have been done during the season, but the trouble between Chili and Peru has had a depressing effect upon trade; and though the above figures are on a par with those of recent years, they do not compare in amount with the operations of the earlier years of the decade just closing. In 1872 and 1873 the shipments were twenty-eight million, and thirty-six million respectively.

ARNPRIOR LUMBER TRADE.—The Arnprior *Chronicle* says that Messrs. McLachlin Bros., of Arnprior, are making extensive arrangements to meet the wants of the lumber trade next season. They are rebuilding the waterways leading to their mills, and putting everything in order to insure an early start in the Spring. They contemplate the erection of a large steam mill here next summer, which they expect to have in running order early in the Fall. About 700 men are employed by this firm in getting out logs and square timber on the Madawaska and Conlongo this Winter. The firm recently purchased a new limit of 100 miles on Opeongo Lake. They have now four large limits, situated on the Madawaska, Bonnecherre, Coulonge and Petawawa streams, and we learn that it is their intention to carry on lumbering operations on a most extensive scale.

MINING NOTES.

WHEELING, W. V., Jan: 5.—The strike of coal miners in this vicinity has caused iron mills and glass factories to suspend, throwing 5,000 men out of employment.

WHEELING, West Va., Jan 5.—A strike of coal miners in this vicinity has caused the iron mills and glass factories to suspend, throwing 5,000 workmen out of employment.

TAKON RIVER.—Marvellous stories of the richness of quartz from the Takon River diggings are told. The specimens are very rich. The mines are believed to be in Canadian territory.

THE Brockville *Recorder* says, Mr. Caldwell, of the firm of Boyd & Caldwell, opened a new mine on the 1st inst. in the township of Lavant. The ore taken from it is of the very best quality.

THERE is good authority for stating that such is the rush to secure and develop mining properties of one description or another in Nova Scotia, the Provincial Government will realize about $100,000 a year from mining licenses, royalties, &c.

THE BEAUCE MINES.—The Canada Gold Mining Company of the Gilbert River, Beauce County, are employing fifty men. The operations of this Company are conducted, it is said, in keeping with their pretensions, which are solid and substantial.

A SENSITIVE MULE.—Employees of the Streator Coal Company attempted to lower a fresh mule into the mines. When the cage started down the animal was overcome with terror, and when they went to take him from the cage they found he had died of fright while descending.

OTTAWA MINING.—The phosphate interest is looking up. Some fifty men are constantly employed in mining operations in the Du Lievre district. There are 3,000 tons ready to bank on the river, and hauling to Buckingham station has begun. It is estimated that some $75,000 will be paid for teamlng alone this winter.

SILVER ISLET.—A gentleman well acquainted with Silver Islet, states that, from the silver ore now within view, and from the general results of drilling operations, he is of opinion that there is still between $50,000,000 and $60,000,000 worth of silver in the mine. He thinks that there is little doubt but the Pie, Victoria and Duncan mines are almost equally rich. A very valuable gold mine has recently been discovered some distance from Prince Arthur, and the vein traced a distance of six miles. The mining interests of the Thunder Bay region certainly never appeared more promising than they do now.

THUNDER BAY.—The North Shore *Miner* says Mr. Amos Bowerman came up from the Thunder Bay Iron Mine last evening, accompanied by one of the miners. He brings with him several specimens of the ore taken from the vein. He informs us that the prospects are looking brighter and brighter every day, as the work advances. The men are still at work uncovering the vein, no ore of any amount being taken out. Everything is being got in readiness for the extensive development to be carried on next season. Mr. B. returns again in a day or two.

The St. Ouge Company have sold out to a Mr. McArthur, of Toronto, who is working his mine with quite a force of men. Lot 13, owned by Messrs. J. Ainsworth & Co., of New York, employs a few men, and the results have not been very favorable. Under a sworn statement before the Mining Inspector, of this District, ending 31st October, the yield was but ninety-one ounces. At $17.50 per oz. this would be in round numbers $1,592.50. The time taken to get this amount of gold will date from the month of August until 31st October, about two and one-half months. This last-named Company's pay rolls amounted to $2,000 and upward per month, showing a serious loss to the Company. The property of this Company is now under seizure for debt due labor and goods furnished. This is the second New York Company which beginning under fair auspices have fallen short.

EAGLE HEAD MINE, C. B.—A correspondent describing the mine says:—The property consists of one square mile—is situated on the North Shore of Gabarus Bay;—contains three lodes of ore, measuring, respectively, 90, 45, and 36 feet. Other lodes are known to exist on the property, but have not yet been prospected. The analysis show a good per centage of Copper and Bismuth, and a small percentage of Silver and Lead, with a trace of Gold, and some other minerals in small quantities Ore can be taken out nearly as fast as it can be shipped. The facilities for shipping are excellent, as vessels can load within 100 yards of the mine. Should the ore give satisfactory returns, the prospect of a great mining establishment at Eagle Head is very certain. The property has just changed hands—Messrs. McKinnon and McKenzie were the former owners, and McLellan and Fearn, of Halifax have recently bought the property, and are now operating it with good prospects of success. Mr. McLellan is Manager.

A TOUCHING STORY.—One rarely meets a bit of more touching romance than is found in the following story that comes from Wales: "Years ago some Welsh miners, in exploring an old pit that had long been closed, found the body of a young man dressed in a fashion long out of date. The peculiar action of the air of the mine had been such as to preserve the body so perfectly that it appeared asleep rather than dead. The miners were puzzled at this circumstance; no one in the district had been missed within their remembrance, and at last it was resolved to bring the oldest inhabitant—an old lady long past her eightieth year, who lived single in the village the whole of her life. On being brought into the presence of the body a strange scene occurred; the old lady fell on the corpse, kissed and addressed it by every term of endearment, couched in the language of a bygone generation. He was her only love; she had waited for him during her long life; she knew that he had not forsaken her. The old woman and the young man had been betrothed sixty years before. The lover had disappeared mysteriously, and she had kept faithful during that long interval. Time had stood still with the dead man, but had left its mark on the living woman. The miners who were present were a rough set, but very gently and with tearful eyes removed the old lady to her house, and the same night her faithful spirit rejoined that of her long-lost lover."

A MOUNTAIN OF SILVER.—The captain of a whaling vessel just returned from the Arctic Ocean says that, while the vessel was lying in a small bay at the mouth of one of the rivers which empty into the ocean on the coast of Alaska, he, one of the mates and four men, went up the river to catch salmon. At the foot of a hill, bordering on the river, they commenced fishing. While the sailors were engaged in this work, the captain and mate ascended the mountain, which appeared to be about 400 or 500 feet high. Arriving at the top, they found what seemed to be the crater of an extinct volcano, and around were evidences that at one time there had been a terrible eruption. In the crater itself the captain noticed that the rocks resembled congealed iron after it had been melted, and undertook to knock off a piece, but could not do it, as it bent and did not break with his repeated blows with the head of a boat-axe. He then struck it with the blade of an axe, and actually chopped it off. He saw that the substance was as soft as lead, but it did not shine. He determined to bring it to San Francisco and have it assayed. One of the natives also brought a piece of rock about 12 inches long by 6 inches thick, which weighed 48 pounds and sparkled with gold, stating that he had found it near another hill further up the river and that such rock was plenty there. When the vessel arrived at this port, the captain told his story to a gentlemen living in Oakland, and the specimens were handed over to him for the purpose of having proper assays made. This was done, and the piece which the captain chopped off the top of the hill with the axe went $6,000 per ton in silver, and the loose rocks picked up on the side of the hill went as high as $275 of silver per ton. It seems, then, that this hill is a mountain of silver, and that it is only the beginning of vast discoveries which will soon be made in Alaska, which may yet become the El Dorado to which thousands will rush. The Oakland gentleman spoken of immediately formed a party or Company, which has chartered the whaler to take a trip to the scene of the remarkable find as soon as the season opens.—*San Francisco Chronicle.*

NEW BRIDGE.—The new iron railway bridge across the Ottawa above the Chaudiere Falls, just completed, is a fine structure, 2,160 feet in length. The first passenger train ran over it on Thursday last. It has been severely tested and the greatest deflection of any of the spans was but half an inch. The bridge is calculated to bear six times the pressure ordinarily to be put upon it. It will be used by the Q. M. O. & O. Railway, which will have a union station on the Ottawa side of the river with the Canada Central.

Schliemann.

A GLANCE AT THE EARLY DAYS OF THE GREAT DIGGER GIVEN IN HIS NEW BOOK.

Before plunging into the record of his discoveries Dr. Schliemann stops to tell the story of his life. It is such a one as we might expect from such a man, and shows how the work of his later life has been the natural consequence of the impressions he received in his earliest years, "The pick-axe and spade for the excavation of Troy and the royal tomb of Mycenæ," he writes, "were both forged and sharpened in the little German village in which I passed the first eight years of my childhood." Dr. Schliemann also thinks it necessary to relate how he obtained the means which enabled him in the autumn of his life to realize the great projects formed when he was a little boy. With a scholar's simple mindedness he flatters himself "that the manner in which I have employed my time as well as the use I have made of my wealth will meet with general approbation." Dr. Schliemann need feel no doubts on that point. There may be a few to cavil, but their idle tongues are drowned in the applause of the multitude. This distinguished explorer was born on the 6th of January, 1822, in the little town of Neu Buckow, in Mecklenberg-Schwerin, where his father was Protestant clergyman, and from whence he moved in 1823 to the village of Ankershagen, in the same duchy. In Ankershagen the young Schliemann spent the first eight years of his life. The neighbourhood was as full of tradition as it was of ruined castles, and the imagination of the boy had full sway. Near the Schliemann cottage was a tomb in which the body of an infant and countless treasures were said by the village gossips to be buried. Nothing but the stern command of his father prevented the child from beginning his excavations then and there and proving the truth or falsity of the village tongues. Though the elder Schliemann was neither a scholar nor an archæologist, he had a passion for ancient history, and the first stories he told to the child at his knee were of the Homeric heroes. When nearly eight years old the reverend Schliemann presented his son with a volume of Dr. Jerrer's "Universal History," containing an engraving representing Troy in flames, with its huge walls and Scæan gate, from which the good Æneas was escaping with his father on his back. This picture convinced the boy that Troy could not be utterly destroyed. "Father," he cried, with a precocity that must have carried conviction "if such walls once existed they can not possibly have been completely destroyed; vast ruins of them must still remain, hut they are hidden away beneath the dust of ages." They argued the question awhile, and the son climbed down from his father's knee, vowing that he should one day excavate Troy. This idea so filled his mind that he could not enter with spirit upon his dancing lessons, and his teacher complained that his heels were as heavy as his head. At the age of 14, the affairs of the family made it necessary for him to leave his studies and go to work. He became a grocer's clerk, but his heart lay buried in Troy. With the coffee bags on his back he was Æneas rescuing his old father from the flames; dealing out molasses to petty-maids, he was Paris offering bumpers of wine to Helen. Fve years of this drudgery did not change his determination. After various mishaps he got a situation in the country house of an indigo merchant in Amsterdam. Here he saw an opportunity to rise. The lever he used was hard work. At first he took writing lessons to improve his unclerical penmanship. Afterward he began the study of languages. His salary at this time was $160 per annum, half of which was spent on his studies. On the other half he lived "miserably enough." His lodging, which cost eight francs a month, was a wretched garret without a fire, where he "shivered with cold in winter and was scorched with heat in summer." His breakfast consisted of "rye-meal porridge," and his dinner never cost him "more than two pence." But nothing, he exclaims, "spurs one on to study more than misery and the certain prospects of being able to release one's self from it by unremitting work." He studied English and French, and mastered both in a year's time. Dutch, Spanish, Portuguese, Italian, and Russian followed, and later Latin and Greek. Such a man could not fail to attract the attention of his employers, for he delved as hard at learning the indigo business as at Greek roots. He rose step by step. He was sent to St. Petersburg in 1846 as agent for his Amsterdam employers, but gradually becoming richer he set up for himself. In 1850 he went to California to look for a brother, whom he found dead; but the newly annexed country was made a state on July 4 of that year, and as, says Dr. Schliemann, "all those then resident in the country became by that fact naturalized Americans, I joyfully embraced the opportunity of becoming a citizen of the United States." In 1858 he thought he had money enough to retire, and traveled over northern Europe, Italy, Egypt and Palestine. A lawsuit brought him back to business to St. Petersburg, where he made more money. In 1863 he again found himself rich enough to retire, so he gradually liquidated his business, and as a preliminary holiday to his life work began in 1864 a tour of the eastern world, crossing back by way of San Francisco, and writing his first book, "China and Japan," on the voyage. He came by way of Nicaragua to the eastern States, visited Havana and Mexico, "and in the spring of 1866, settled down to the study of archæology henceforth, with no other interruption than short trips to America."

Another Cliff Town Discovered.

The occurrence of ancient cliff towns, built upon or rather in almost inaccessible places along the precipitous sides of river canons in Colorado and New Mexico, was made known several years ago. Another very important discovery of this nature was made a short time since by Mr. James Stephenson, of the U. S. Geological Survey, in New Mexico. The city lies in a canon thirty miles long, never before visited by white men, and is about forty miles from Santa Fe and ten miles from the Rio Grande. It consists of a succession of excavations in the solid rock throughout the length of the canon, making, perhaps, the largest cliff town yet discovered.

The houses are dug out of the rock side to a depth of from fifteen to twenty feet. Apparently they were exchavated with stone impliments. They are almost inaccessible from the plains. Mr. Stephenson, however, managed to clamber up the rocky precipice, and entered and examined a number of articles that he thought remaind of their first possessors. A scientist who had traveled in that region and visited other caves and exchavations of a similar kind says he is disposed to believe that they have been tenanted within modern times by Indians at war with other tribes, seeking safety and advantage over their enemies. He thinks the remains found there are the remains of the things these belligerents have used, eaten, or worn, and not the relics of the first owners of the rock houses.

Exhausting the Wheat Lands.

(From the Pall Mall Gazette)

There is one point in American competition with England which, though it has now and then been touched upon, has never been thoroughly worked out. America is undoubtedly reducing the rent of land in England by the amount of food which she is enabled to send over here at a cheap rate. In this way, too, land of inferior quality in England is going out of cultivation. But all this grain which is sent represents really so much valuable manure. Instead of using it we silt up our rivers with the sewage of our large towns, and millions' worth of fertilizing agents are year after year swept into the sea. This is bad enough by itself. What is worse, however, is that each successive wheat centre in the United States is more rapidly exhausted than the one before, owing to the excessive over-cropping and the want of manure. Thus, the soil in the United States is undergoing deterioration to supply us with the necessaries of life, while we who receive the food allow our soil to go out of cultivation when the very substances we receive would if properly used enrich and fertilize it. Posterity, perhaps will think we had very curious ways of dealing with their planet.

A FAMILY never becomes extinct in Japan. If there are no male descendents, a young son of another family is adopted, and takes the family name.

A lecturer once prefaced his discourse upon the rhinoceros with, "I must beg you to give me your undivided attention. Indeed, it is absolutely impossible that you can form a true idea of the hideous animal of which we are about to speak unless you keep your eyes fixed on me!"

How they get India Rubber in Africa.

(From the Rubber Era.)

Having passed fully three years on the southwest coast of Africa, as trader for an English firm, I will endeavor to describe the manner in which India rubber is procured in that country, as India rubber formed the staple produce of the district were I was located.

The natives are in a very rude, uncivilized condition. They have no currency, and do all business by battering the native products for manufactured stuffs. Their wealth consists chiefly in the number of slaves they possess, who fish, hunt, and keep their plantations in good order.

When rubber has been collected, from four to ten slaves get their flint muskets in order, each carrying, in addition, a long sword-shaped knife called a machete, a number of calabashes or jars to collect the juice of the rubber vine, and a little food that as been cured in smoke, as they can find plenty of sustenance in the bush without carrying it about with them from place to place.

The vine are in some cases near to the towns, but generally the natives have to go several day's journey into the bush before they can sit down and commence business. The vine itself is of rough, knotty nature, about as thick as a man's arm, and grows to a length of fully two hundred feet. Its leaves are are glossy, like those of the South America trubber tree, and a large fruit much liked by the natives, is gathered from it. I have tasted it, and found it very palatable, being slightly acid. This vine (what its scientific name is I don't pretend to know) yields several grades of rubber, each of different commercial value, the best quality being taken from the highest part, and the poorest from the bottom.

With their knives, or machetes, the natives slash the vine in several places, and put broad leaves directly underneath the wounds for the juice to drop on, and which, being of a strong, adhesive nature, none of it may drop on the branches of the tree, and so get lost; but it is not often they trouble themselves climbing, unless the vines happen to be scarce in the vicinity. The entire day they devote to cutting; next day they gather what was cut the day previous, and so on. Each evening, after collecting, they put all the juice they have into several iron pots, or earthern vessels of native manufacture, and boil it; at the same time they can greatly improve the lowest quality by adding a little salt, and the more they boil the juice the better it becomes. When sufficiently boiled the water is poured off and the juice is allowed to cool, when it is fashioned according to the grade—ball, flake, mixed, or tongue—and is ready for the market. In this way about twenty or thirty pounds a day is generally collected. It is then taken to the factory, and there exchanged for guns, cloth, rum, &c. When it is received at the factory it is carefully marked, classed, weighed, and put into casks for shipment. It contains so much water that twenty per cent. is deducted from the weight of each cask, as that is about the amount of shrinkage on the voyage. This is, however, a loss to the native, as it is deducted from him when selling.

This vine, from my personal observation, is to be found from Sierra Leone in the north to Vunsembo in the south, but along the coast line it is rapidly becooming extinct, as the natives are so careless or repacious that in many cases they completely sever the vine, thus killing it, instead of simply bleeding it.

An Ice Cave in Monta.

Two explorers named Lambert and Caruthers discovered, last summer, a large cave on the Dry Fork or Arrow Creek, in the Bell Mountains, in which was half an acre of solid ice of unknown depth. At the time of the discovery, about August 1, the ice was covered with ten inches of water, which prevented, a thorough exploration of the Cave. The Fort Benton *Press* says that the ice gives every indication of being in a great body, and it is believed, from its appearance, and the fact that in the hottest season only a few inches of it was melted, that it is perpetual. The cave is described as being a great resort for game, as all kinds were killed close to its entrance.

UNCOMPROMISING.—The doctor's daughter—"I declare you're a dreadful fanatic, Mrs. McCizzom. I do believe you think nobody will be saved but you and your minister!" Old lady—"Aweel, my dear, ah whiles I hae my doobts aboot the meenister!"

SCIENTIFIC GOSSIP.

Dr. Maclaren, of Edinburgh, Scotland, states that the types of insanity have changed within modern times. For instance, acute delirous mania is now comparatively rare, but mental enfeeblement attended with paralysis is becoming more and more common, and is the result of the overwork and worry of the struggle for existence at the present day.

The Russian Government is well pleased with the new torpedo-boat called the Batoum, which has been thoroughly tested in the Black Sea. This vessel is 100 feet long, and carries two torpedo guns, built into her hull forward, for discharging Whitehead torpedoes. In the boats of the same class now building there will be three torpedo guns forward instead of two. The Batoum behaves excellently at sea, and makes 22 knots an hour.

A very powerful electric light of the Brush system was exhibited on Nov. 29 at the London works of the Anglo-American Electric Light Company. The lamp, of the ordinary Brush type, carried carbons 1.25 inches in diameter, and the energy of the current was so strong that the carbons were raised to a white heat two inches from the arc. The photometric power of the light is said to be 47,000 standard candles.

Neither the cool walks of science nor the deep shades of the descent of the hill of life seem capable of subduing the hot blood or tempering the fiery language of some men. The *Medical Press and Circular* says: "A most painful scene has occurred at a session of the Paris Academy of Medicine. During a warm discussion on the cholera of fowls, M. Guerin addressed M. Pasteur in the following words: "You are a liar, Sir; I will send you my seconds." Yet M. Guerin is an octogenarian and M. Pasteur hopelessly paralyzed on the left side.

M. A. Colson thus describes the manufacture of phosphoric acid in the *Bulletin* of the Chemical Society of Paris: "Natural phosphates, underground, are dissolved in dilute hydrochloric acid. When the acid has ceased to act the clear solution is run off from the insoluble matter and mixed with sulphuric acid enough to saturate all the dissolved lime, leaving a mixture of hydrochloric acid, diluted phosphoric acid, and calicium sulphate. This mixture is submitted to pressure to separate the sulphate from the free acids, which are then concentrated, and the hydrochloric acid is condensed and collected for use by means of ordinary columns.

From a comparison of the result of recent deep-sea soundings, it appears that the following are just generalizations: 1. The water of the North Pacific is in its whole mass cooler than that of the Atlantic. 2. The water of the South Pacific is, down to 4,225 feet, somewhat warmer than that of the Atlantic, but below that depth colder. 3. The bottom temperatures are generally lower in the Pacific than in the Atlantic at the same depths and in the same degree of latitude; but nowhere in the Pacific are found such low bottom temperatures as in the Antarctic portion of the South Atlantic, where temperatures of—0.3° Centigrade to —0.6° have been measured. 4. In the western parts of the Pacific and the adjoining parts of the East Indian Archipelago the temperature of the water reaches its minimum at depths between 1,787 and 8,937 feet, remaining the same from this depth to the bottom. In the whole of the Atlantic the temperature from 8,937 feet to the bottom gradually, though slowly, increases.

A very interesting lecture was recently delivered before the Anthropological Institute, London, by Mr. J. F. Rowboeham, on the different stages in the development of the art of music in prehistoric times. Although, he said, the varieties of musical instruments may be counted by hundreds, yet they are all reducible under three distinct types: 1. The drum type. 2. The pipe type. 3. The lyre type. These three types are representative of three distinct stages of development through which prehistoric music had passed, and in the order just stated. The first period in the development of music was the drum stage, in which drums and drums alone were used by man. The second was the pipe stage, in which pipes as well as drums were used. The third was the lyre stage, in which stringed instruments were added to the stock. There three stages answer respectively to rythem, melody, and harmony. In the musical history of mankind the lyre stage is never found to precede the pipe stage, nor the pipe stage to precede the drum stage.

The Sultan s Levee.

POMP AND CEREMONY AROUND THE REPRESENTATIVE OF THE BANKRUPT OTTOMAN EMPIRE.

We assisted at the grand Bairam ceremonies at Dolma Baghiche palace yesterday. The Sultan holds a levee, and receives all the ministers, officials, and officers, who congratulate his majesty and wish him a prosperous Bairam or festival. The diplomatic body was ushered through a number of lofty passages, through countless salons blazing with gilt, Damascus silks and marqueterie, into what is considered the most magnificent throne-room in the world. It is a gigantic oval, with glittering wood floor and whose roof is upheld at an immense height by splendid Corinthian colums of fluted marble, of that fine pink-veined quality only quarried at Lesbos. Every inch of the roof is covered with a fresco painting of such artistic style that it can hardly be distinguished from groups of flowers, arabesques, etc., in bold relief. Great windows let in the glorious light of day at either end, and near one of those windows was the throne, at that moment unoccupied. It is a low, wide sofa, about five feet long, whose back, legs, and sides,are covered with plates of gold, and covered with a red silk cushion studded with stars.

When we entered the Salle du Trone it was filling with the throng of government officials, some of whom had come from long distances to pay their court to their sovereign. One venerable snowy-bearded pasha was pointed out to me as the governor of Hedjaz, the most distant Turkish vilayet, and who had spent nearly three months en route. This glittering array of uniforms was slowly placing itself in a double line all around the hall, and more were pouring in constantly and taking their places. The cabinet ministers, prominent among whom was Behram Agha ,the chief eunuch, an attentuated old "darkey" in a gold-bespattered dress coat, placed themselves in a line standing, behind the gold divan. Without an exception, they all wore the grand cordon of the Osmanie with the "Cracket" in brilliants. Pretty soon about 2,000 persons were in, all in full uniform, officers in epaulettes and swords, muftis in flowing robes of green, purple, cream-white, and blen tendre with tight, black coats showing off well with their splendid figures, with the double range of silver cartridges on each breast, and their Astrachan caps half concealing the classic features of descendants of the oldestrace in Asia.

Presently a sort of thrill runs through the line of patient officials, each man steps well into line, adjusts his gold collar, tilts the fez a fraction of an inch further back. gives a last tug at his new gloves, the folding doors at one side near the throne are flung open; and welcomed by a pealing crash from the Imperial Band in the gallery, the autocrat of Turkey slowly steps into view and takes his place on the throne. A concealed chorus then sang, or rather shouted, a species of short song of praise, and every Turk present bowed in an humble salaam. This is done, I may explain, by scooping up an imaginary handful of dust, and rapidly placing it on the lips and forehead, the depth of the "scoop" being in direct proportion to the rank of the *salutee.*

The ceremony of the Rikiab, or "submission," which consists of kissing an embroidered scarf held by the grand master of ceremonies, in lieu of the Sultan's hand, then began. The cabinet ministers fell in line, followed by ex-grand vizers, generals, admirals, murtis, and so on down to the small fry. Each one salaamed when within three yards of the Sultan, did so again just before kissing the scarf, did so immediately after, then backed off a few paces and made another salaam. This being done very solemnly and very methodically, two or three hours elapsed ere the last fez had bowed before the sovereign. The band had at intervals played in excellent style several pieces among which the Turkish national air, "The Hamidie," a spirited march was prominent.

The sultan then rose, made a slight but comprehensive bow, returned by a low salaam from the two thousand courtiers, and disappeared from behind the folding doors, at each side of which a splendid Circassian then placed himself, in a martial attitude.

We were about to wrap up and leave, when a stout aide-de-camp appeared among the little knot of visitors, and informed us that, as a great exception, the sultan would be graciously pleased to receive us all personally. We numbered about fifteen. There were Count Hatzefeldt, the German ambassador; Mrs. Tyrell his sister; Mrs. Goschen, Mme. de Novikoff, wife of the Russian ambassador; the Spanish minister's wife in a gorgeous dinner dress (!), a small party of Englishmen from the Pandora, Hon. W. H. Smith's yacht, and the American party consisting of Gen. Longstreet, our minister, who arrived the day before, Mr. Robert Hooper, jr., and your correspondent. We passed into a small blue-satin room, and found the sultan standing near the threshold, with two officers behind, him and Munir Bey, his interpreter, at his side. We were all presented, and bowed and shook hands silently with his majesty. Abdul Hamid wore a long blue coat of very antiquated cut, black trousers with a broad red stripe, the single star of the Osmanie, and a broad green-and-red ribbon crosswise on his chest. He is a little under the average height, with a sallow, anxious face and a thin black beard, and with deep crowsfeet and forehead wrinkles. His smile, however, was remarkably pleasant, and his voice low and musical.

As we left the presence, he invited us to come another day and visit the palace—a rather unusual piece of courtesy.

The Stormy Petrel.

The stormy petrel, known to sailors as the Mother Carey's children, is hated by them after a most illogical manner because it foretells an approaching storm, and therefore by a curious process of reasoning is taken for its cause.

This bird has long been celebrated for the manner in which it passes over the waves, pattering with its webbed feet and flapping its wings so as to keep itself just above the surface. It thus traverses the ocean with wonderful ease, the billows rolling beneath its feet and passing away under the bird without in the least disturbing it. It is mostly on the move in windy weather, because the marine creatures are flung to the surface by the chopping waves and can easily be picked up as the bird pursues its course. It feeds on the little fish, crustaceans, and mollusks which are found in abundance on the surface of the sea, especially on the floating masses of algæ, and will for days keep pace with a ship for the purpose of picking up the refuse food thrown overboard. Indeed, to throw the garbage into the sea is a tolerably certain method of attracting these birds, who are sharp-sighted and seldom fail to perceive anything eatable. It is believed that the petrel does not dive. The word petrel is given to the bird on account of its powers of walking on the water, as is related of St. Peter.

It does not frequent land except during the breeding season, and can repose on the surface of the ocean, settling itself just at the mean level of the waves, and rising and falling quietly with the swell. The petrel breeds on the northern coasts of England, laying a white egg in some convenient recess, a rabbit burrow being often employed for the purpose.

This bird possesses a singular amount of oil, and has the power of throwing it from the mouth when terrified. It is said that this oil which is very pure, is collected largely in St. Kilda by catching the bird on its egg, where it sits very closely, and making it disgorge the oil into a vessel. The bird is then released and another taken. The inhabitants of the Faroe islands make a curious use of this bird when young and very fat, by simply drawing a wick through the body and lighting it at the end which projects from the beak. This unique lamp will burn for a considerable period. Sometimes the petrel appears in flocks, and has been driven southward by violent storms, some having been shot on the Thames, others in Oxfordshire, and some near Birmingham. The general colour of this bird is sooty black, and the outer edge of the tertials and the upper tail coverts are white. Its length is barely six inches.

MARY STOVER took a dose of strychnine. A pet poodle licked her face while she was in her agony, and the poison on her lips killed the dog. The woman will recover.

NOT even the physician can know everything. When a doctor told a young man that he must go to the river side every morning for a bath the youth replied that the water at this time of year is too cold. "Well, you must have the bath," said the doctor, as he finished writing the prescription, "and if the water is too cold you must put your overcoat on."

Sanitary Reform.

The London Society of Arts recently discussed the feasibilty of keeping a sanitary record of every house, so that the Health Board of a town should be able to give an intending purchaser or tenant a certificate of its healthworthiness. The debate made it apparent that, in the case of old houses especially, sufficient pertinent facts could not be obtained to justify such certificates.

It is easy to see how greatly they might affect the value of property; and therefore they would prove exceedingly mischievous and outrageous if they were not scientifically accurate. And that it is not possible to make them in every case, nor even in the majority of cases. Sanitary inquiry has certainly not yet reached a stage where it can point out with confidence the exact and immediate causes of disease, and fix the blame for them with absolute precision. We call it a science, just as we call political economy a science; but strictly, the term is of course misused. It may become a science, but the day is yet far off.

When municipal authorities assume to pass judgment on the healthfulness, and consequently the value, of the premises owned by individuals, they should be very sure of their facts, and that they have enough of them to form an opinion on. They can now point out remediable nuisances, and palpable defects in sanitary engineering; but if they undertook to give medical certificates as to the comparative healthfulness of the different houses throughout a town, they would be certifying to matters about which they are plainly incompetent to form an opinion of value. No dozen physicians would agree on the subject.

But, in his recent address before the American Public Health Association, Dr. J S. Billings, its President, advocated modification of the plan suggested in London. He would have the health officer of a place obtain and keep a brief description of all its houses from a sanitary point of view. This would be merely a record of facts, to which individuals proposing to buy or rent houses could have access on the payment of a fee. The Health Board would express no opinion, but simply give a sanitary history of the property, its connection with sewers, the number and the causes of the deaths which had occurred in it, or in the square in which it was situated, and other information of that sort. It would be a sanitary supplement to the record of title, and of course might have a decided effect on the value of the property.

But Dr. Billings's plan, pretty as it is in theory, would involve so much minute detail that it would not be feasible in any municipal government on a large scale. To carry it out there would need to be a great multiplication of sanitary inspectors, and their official visits would become odious to the people. Moreover, the number of deaths occurring in a house may afford no certain indication of its condition as to healthfulness. People may take there the diseases of which they die, and an evil name be given a dwelling which it does not deserve. Property owners would justly cry out against a system of registration which put the value of their buildings in peril by following theories of the origin of disease which are not yet firmly established.

What is called sanitary science promises to become of the greatest benefit to communities. It has already demonstrated its value both here and abroad, for its tendency is obviously in the right direction—that of the prevention of disease. It has undoubtedly helped essentially to bring about the increase in the average of life which this century is showing; and it is not too much to expect that it will in the future obtain a pretty complete mastery over epidemics, though yellow fever and even typhoid fever now baffle its efforts to discover and remove their causes. But there is a growing number of men, laymen rather than physicians, for the most part, who make a hobby of sanitary inquiry, and treat it as if it was a fully fledged science against which there could be no reasonable rebellion. Dr. Billings has too high and justly deserved a reputation to lend himself to the support of the crotchets of these fanatics; but such a proposition as his is likely to be run into the ground by them.

There is, however, a sensible effort now making to effect in part the end he would attain. It is to secure the passage of a law by the Legislature requiring that when specifications for building are filed, there shall go with them specifications of the plumbing and house drainage. These would enable an export to form an opinion as to a house's protection against sewer gas, and show him its sewer connections.

GENERAL

The town of Hull, England, is to have its streets lighted by the Siemens system of electric illumination.

THE resumption of specie payments in Italy is opposed by capitalists and speculators in gold; yet a forced currency is no longer needed, as the country is peaceful and advancing in manufactures, and last year there was an excess of $42,294,000 in receipts over expenses in the budget. Parliament has voted to adopt a resumption policy.

THE famine in Russia, it is predicted, will assume proportions altogether beyond previous estimates, and no steps are taken to meet it. The Russian peasant cannot afford at the best of times to eat wheat, and this grain has been sold long ahead to the Jews and other middlemen. What is needed is an immediate importation of cheaper grain, if such can be obtained.

A BUG has turned up in Asia Minor which feeds uponthe eggs of the locust. Where a cluster of locust eggs is examined the destroying insect appears in the midst of them. Locusts from time immemorial have made themselves disliked in Asia, and the new bug, which is believed deposits its eggs in the live locust's body, has general sympathy and encouragement.

A SCHEME is under consideration for a canalacross the Malayan Peninsula, by which it is believed that English mails may be delivered in Hong Kong in twenty-nine days and a half, a saving of nearly seven days by the present route. The line would be from Bombay to Madras by mail, thence across the Bay of Bengal, and by the canal over the peninsula into the Gulf of Siam, and thence direct to Hong Kong.

ALTHOUGH Brazilian coffee makes up about one-half of the quantity produced in the entire world, it seems to be held of so little account in the markets that, to insure a sale, it has to be labelled as Java, Porto Rico, Ceplon, or Mocha praduce. In the country there are no fewer than 350,000,000 plants, covering 1,500,000 acres, and yielding a crop of 260,000 tons of which 50,000 are retained for home consumption.

ACCORDING to the imperial budget, the German army on a peace footing, as supplemented by the accession of strength recently voted, now consists of 18,128 officers, 427,274 men, and 81,629 horses, the addition including 901 officers, 25,615 men, and 1,736 horses. Of these Prussia receives eight new infantry regiment and one battalion with one field artillery regiment, twenty-four field batteries, and one fortress artillery regiment, the rest being distributed in small proportions between Saxony, Wurtenburg, and Bavaria. The greater part of this new force will be garrisoned in towns nearer the Russian frontiers, an arrangement which is perhaps due to the existence of better barrack accomodation in the east than in the west.

ACCORDING to the St. Petersburg correspondent to the *Cologne Gazette,* a Supreme Council of State is to come into existence in Russia at the Russian new year. This council is to carry on all the business of the empire independently of the Czar, the latter retaining the decision only of questions of war and peace. His union with Princess Dolgorouki will be proclaimed as a legal marriage, without her becoming, however, Empress. She is to receive the title of Duchess of Holstein-Gottorp, and her children will be princes and princesses of the same name. Henceforth the Czar is expected to live with his family in retirement at Livadia, remaining Emperor in name, but, so far as Russian circumstances permit, transferring the cares of business to his son.

IN clearing away the remains of one of the ruined Bastions of Yedi-koule, near Constantinople, the agents of the Prefecture discovered a large quantity of gunpowder, the existence of which was not before suspected. Information was at once sent to the Ordinance Department, whence an expert was despatched to examine the powder. Powder, strickly speaking, it was not, for the grains was as large as filberts; but a grain thrown into the fire showed that the composition was of a highly explosive character, but the expert could not precisely determine what the quality was without submitting it to analysis. The powder is believed to have been deposited where it was found prior to the conquest of Constantinople by Mohammed the Second.

THE CANADA LUMBERMAN

AND MILLERS', MANUFACTURERS', AND MINERS' GAZETTE.

ISSUED SEMI-MONTHLY AT TORONTO, ONT.

A. BEGG, - Proprietor and Editor.

TERMS IN ADVANCE (Post-paid):

One Copy one year..... $2 00
One Copy six months..... 1 00

ADVERTISING RATES

$1 50 per line per year; 85 cts. per line for six months; 50 cts. per line for three months.

Small Advertisements 10 cts per line first insertion 5 cts. per line each subsequent insertion.

Business Cards, Forms of Agreement, Bill Heads, &c,. promptly supplied to order, at the LUMBERMAN Office.

Communications, orders and remittances should be addressed to A. BEGG, LUMBERMAN Office, 33 Adelaide Street West, Toronto.

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TORONTO, ONT., JANUARY 15, 1881.

HEMLOCK TREES AND BARK.

In view of the fact that the pine is being rapidly stripped from the districts of Muskoka and Parry Sound, a Bracebridge correspondent thoroughly familiar with the subject, calls our attention to the great destruction of hemlock, which is taking place in those districts to supply tan bark. He estimates that there are about 10,000 cords of hemlock bark peeled annually in that region, and assuming that seven trees of an average diameter of 13 in., and 36 feet in length will furnish a cord of bark—would equal 3 saw logs of 13 inches diameter, which by Scribner's rule gives 219 feet of lumber: or 10,000 trees would make 15,320,000 feet. This has been going on for the past four years, so there must have been 61,320,000 feet of lumber felled during that time, but not more than one million feet of this large amount has been manufactured into lumber. The balance has been left to rot in the woods, or which is far worse, to make kindling wood for the first bush fire which may happen to break out near by, and which might destroy the greater part of the valuable pine or hemlock left standing. As long as pine stumpage is cheap, and as long as pine can be obtained, no one cares to go into manufacturing hemlock lumber; and as tanners must have bark the waste will go on and the wood left useless. A portion of this bark is peeled on patented lands, but the greater portion, our correspondent says, is cut on Crown Lands without leave or license, and it is about time the government took some steps to stop this waste, as the day is not far distant when hemlock will be of more value than the pine now is. In some places, the bush is so slashed down that the refuse seriously interferes with getting out the pine.

We trust the local member for Muskoka will give the matter his attention. Hemlock may yet be required to form a plank of the Commercial Union with the United States, advocated by that honorable gentleman.

GENEROUS.—Messrs. Rathbun last summer, when the men in their employ at the Eagle Mill, Ferry Point, threatened to strike for higher wages, promised if they would not do so, to divide $500 among them at the close of the season The promise was kep and the money divided among the men at Christmas,

DYES FROM SAW DUST.

Mr. John Blair, of Ardtrea, near Orillia, writes to the *Times*, and says he noticed in a late issue of that paper, an article devoted to the description of a new process whereby certain waste products, such as sawdust and decayed wood are converted into dyes of various shades. Some three years ago, he continues, I discovered and perfected a process for the manufacture of dyes from sawdust, wool, hair and horn. At that time I furnished several leading chemists with samples of the new substance, which on account of its close resemblance to certain products formed from indigo is of considerable interest. This compound (which I have termed xanthogen) can be manufactured in large quantities from sawdust, or from almost any organic material. One ton of sawdust when transformed into xanthogen would be worth at least $500; and the same weight of old woollen rags when subjected to the same process would be worth more than $2,000. The above estimate would seem incredible were it not that I am in a position to verify its truth. It will be seen from these figures that there is a mine of wealth in sawdust and old rags for the enterprising capitalist. There are many other ways in which sawdust can be utilized, as for instance in the formation of Prussian blue. A mixture of sawdust, iron filings and a small percentage of potash if heated in an iron retort till all the volatile products pass off, and then if the retort be closed so as to exclude the air and the heat raised so as to fuse the contents, and then if a current of pure nitrogen gas be passed through it the iron will at once be converted into Prussian blue. The nitrogen gas can be easily obtained from the atmosphere by passing a current of air through ignited charcoal and afterwards through a column of iron ore which is to be kept heated to a temperature of 2,200 Faht. After the heated gas passes through the ore the carbonic oxide is converted into carbonic acid and the ore is reduced to a spongy metallic state, and we have now a mixture of C.O2 and nitrogen, which when stored in a gas meter through which lime water is circulatting, removes the carbonic acid and pure nitrogen gas remains. This gas can be used as above stated, and the spongy iron, after it ceases to act on the carbonic oxide is then in a fit state to be converted into Prussian blue.

DEFERRED NOTES.

Before the Christmas holidays we had occasion to make a trip westward as far as Windsor, and being so near that great and beautiful frontier city—

DETROIT,

we crossed to see how our cousins were getting along. Business was lively in almost every branch,—manufacturing, building, buying and selling. Uncle Sam was gay and happy. Immense quantities of provisions and lumbermen's supplies were being sent north. The train for Bay City was loaded with shanty-men. The local prices of lumber had not changed much from former quotations, but were firm. Recrossing to

WINDSOR,

the people there, too, were full of business. The ferry boats are doing a large business, transporting teams loaded with cordwood and other produce from Canada for the Detroit market. A few manufacturing firms from Detroit, as will be seen by reference to our advertising columns, have established branches of their business in Windsor. This is to save the import duty, which with the improved and increased manufacturing facilities in the Dominion enables our manufacturers to compete on equal terms with those in the United States. About a mile up the river is

WALKERVILLE,

founded, and in a great measure sustained by H. Walker, Esq., the extensive distiller there. His establishment is only second in Ontario, to that of Messrs. Gooderham & Worts, of Toronto. Every department of the distillery is in the best of order and condition. The machinery for grinding, mashing, pumping, &c., and a magnificent engine of 200 horse-power with a fly wheel weighing nearly eleven tons—crank shaft 12 inches in diameter, a 20 inch cylinder of 42 inches stroke were manufactured and put in by the Kerr Brothers of Walkerville, who have a foundry near by. The water works of the distillery, worked by a 100 h. p. engine, has three large pumps, said to be capable of drawing from the river 900 gallons of water per minute. The establishment has eight run of millstones in operation, and pays about $350,000 per annum duty into the Dominion treasury. There is considerable traffic in this neighbourhood in stave timber, and some oak is brought in.

CHATHAM

was our next stopping place. This town has grown rapidly within the past few years. The large lumber yards are well stocked with lumber and shingles. The largest is kept by Messrs. H. A. Patterson, & Co., who also manufacture sash, doors, &c. There are several manufacturers of engines, boilers, brass castings, &c. Mr. D. Park has invented a machine for making barrels, including the heading. We expect to be able to explain this machine more thoroughly with the aid of a cut or drawings, shortly. Mr. R. Parkinson's establishment, the Reliance Engine Works, is also worthy of notice. Chatham can boast of some excellent flouring mills, which supply "the staff of life" to the population, whether white or coloured.

Again aboard the comfortable but somewhat crowded cars of the G. W. Railway, and

THE CITY OF LONDON

is soon reached. Here again all is bustle and activity. Building to a considerable extent is going on. The lumber yards are tolerably well stocked. Prices are keeping well up. A visit to the lumber dealers and some of the manufacturers filled up all the time at our disposal. The people seemed contented and prosperous. We met Mr McRae, of Glencoe, who is getting out a large quantity of oak timber this season. He reports the season's work well advanced. A short run on the branch line brings us to

ST. THOMAS,

a thriving town, the proposed terminus of the Credit Valley Railway. The town is growing rapidly, and will continue to increase in importance. It has a large number of planing mills and manufacturing establishments. The Dexter Manufacturing Co. of bent carriage and sleigh work are enlarging their premises; C. Norsworthy & Co. have constructed a tramway engine, to draw logs and timber on pole roads. It is to work in Essex Centre, where 14 miles of track has been laid. We have no doubt the flange driving wheels carrying the locomotive will work well. They are constructed to slide on small steel rollers along the axle to accommodate irregularities in the width of the track, but at the same time are stationary on the axle as far as revolving with it is concerned. The stock of lumber on hand in St. Thamas is large, but as the demand is good both in town and country, it will be all required before next year's stock comes in. The farmers in the neighborhood generally are wealthy. We had a pleasant visit with one of them, whom we had not seen since we crossed the Atlantic with him from Aberdeen, over 34 years ago. Resuming our journey by way of Harrisburg, we stop at

THE CITY OF BRANTFORD,

when limited time only enabled us to visit the works of the enterprising firm of Waterous & Co., whose steam engines, saw mills and other numerous and excellent manufactures are known all over the Dominion. Next we call at

DUNDAS,

which presents a beautiful view from the railway station. With the exception of the cotton factory, Messrs. McKechnie & Bertram's establishment, which turns out all sorts of machinery, and has just been enlarged; an axe factory and planing mill, there does not seem to be much going on in that town. Its proximity to

THE CITY OF HAMILTON

has perhaps something to do with this. Business is good in Hamilton. Manufacturers say they have orders on hand to keep them employed until spring. Building has been continued during the winter. Merchants are in good spirits. Workmen have plenty of work, and some new manufacturing industries are about to be established.

A run by the Northern Railway brings us to

GRAVENHURST.

This is a lively village and prosperous. Its prosperity is chiefly owing to the number of saw and shingle mills in the vicinity, and to its being the terminus of the Northern and Northwestern Railway, where, during the winter season, all freight for the northern region is reloaded, and drawn by teams. The summer trade is mostly carried past, by the steamers, to Bracebridge and Rosseau. Several lumbering establishments have branch offices here. Some idea of the quantity of supplies required may be formed from the following list of lumber to be got out this winter in the Muskoka and Parry Sound Districts:—

	Logs.	Square.	Shingles.
Georgian Bay Co.....	70,000,000		
British Canadian Lumber & Timber Co....	26,000,000		
T. Smith & Son	15,000,000		
Rich Power.	12,000,000		
Muskoka Mill and Lumber Co.....	12 000 000		
J. C. Miller..	15,000,000		
Ontario Bank late Guelph Co.....	9 000 000		
J. Thompson	12,000,000		
Dom. Bank, late Silleman.....	6,000,000		
Toronto Lumber Co.....	7,000 000		
Wm. Tait....	5,000,000		
T. Meikle....	4 000,000		
J. M. Dollar...	4,000,000	200,000	
Messrs. Cockburn	4,000,000		
Woodstock Lumber Co.	5,000,000		
G. W. Taylor	11,000 000		
Wm. Beatty..	3 000 000		
S. S. Cook...	1,000,000	200,000	
Barton Bros...		60,000	
F. H. Hull.	2 000,000		
Abel Marshall	1,000,000		3,000,000
Boyd Caldwell.....	3,000,000	100,000	
O. F. Wright oak & pine		100,000	
G. Chase & Co	1,500,000		
Thompson & Baker			5,000,000
Heath & Tait			1,500,000
W. Strathearn.....			2,000,000
R. Robinson			2,000,000
P. Bartholomew.....			4,000,00
Other manufacturers..	10,000.000		10,000,000
	238,500,000	660,000	32,500.00

Messrs. Thompson, Smith & Son are also getting out 25 million feet at their Duncan City mills, Mich. Last season they cut 15 million feet at their Bradford mills; 2 million at the Barrie mills, and 22 million at Duncan City mills. Their stock on hand is Bradford mills, 6 million; at Duncan City mill, 10 million; Barrie, all shipped. They employ about 600 men and 150 teams. The Muskoka Mill & Lumber Co., last season cut 15 million and have on hand 4,500,000 in lumber and 6,000,000 in logs.

BRACEBRIDGE.

This is the winter head quarters of the British Canadian Lumber & Timber Co.,

formerly H. H. Cook & Co. Mr. Robt. Dollar is in charge, and has every thing in good working order. We learned that the work is well advanced in the 9 camps they are running. The early sleighing and steady cold weather have favoured the work in the whole district. In some of the camps chopping is completed and the logs will be hauled before the first of February. Mr. Dollar has ice sprinklers in operation for hardening the roads.

PARRY SOUND.

This important village seems rather dull in winter, but it will have a large share of the advantages of the lumber trade when spring opens. Mr. Miller is constructing a new iron furnace to consume saw dust, slabs, &c. The other mills are refitting. Mr. W. Beatty intends to increase the capacity of his mill; last year he cut 3 million. The leading men of Parry Sound are anxious to have

A BRANCH RAILWAY

to connect with the Ontario & Pacific Junction. This would place their fine harbour in direct communication with the North West, and would place them within an easy distance of Ottawa should they wish to go there in preference to Toronto.

M'KELLAR'S FALLS.

The Messrs. Armstrong are doing a large business here, in this lumbering centre. They have large contracts getting out logs, keeping about 150 men at work, and report the season very favourable for every branch of saw-logging.

Other "deferred notes" must be left over to another issue.

Toronto and Nippising Railway.

This convenient line of railway has been doing a good business during the past year. The lumber carried over the line is as follows :—

Jany. 574,000 feet. Feb. 286,000. Mar. 602,000. April. 588,000. May 477,500. June 505,000. July 658,000. Aug. 766,500. Sep. 890,000. Oct. 673,500. Nov. 530,000. Dec. 305,000. Total 6,856,000.

The shipments were from Coboconck, Victoria Road, Kirkfield, Uxbridge, Goodwood, Stouffville, Ballantrae, Vivian and Sutton. Should the new mills, contemplated be put up in connection with Gull River, a large trade will be done from Coboconck this year.

LUMBER DRIVING.—In New Brunswick, lumber merchants are alive to the importance of organization in boom accommodation and river-driving. A company similar to the Muskoka Boom and Slide Company is about to be formed to conduct operations on the Miramichi River. The Miramichi *Advance* referring to the subject says :—"If logs are beyond certain points up-river the complications which may arise in driving, seriously affect market values, for the time when delivery can be made, through the booms at the mills, is a very important consideration. Up to the present time it has been in the power of any operator—large or small—to impede the progress of logs to market by not attending promptly to his own drive when it became mixed with those of others. Only last season, 20,000,000 feet of logs were kept out of the market for months in this way and as the business becomes more divided up or new operators come in the danger of interference with the regular log-supplies coming down to the mills will increase. The main river being the common highway which all operators must use, it is obvious that the common interest can best be served by one corporation. A company can drive all the lumber more cheaply and expeditiously than any temporary combination of drivers. No one will be in a position to hold back, in order that he may delay another, while a great deal of anxiety and watchfulness on the part of the owners will be obviated. Let us, then, have the Lumber Driving Company, by all means.

Shipments from St. John.

A late St. John's *Globe* says, the shipments of deals from St. John to Europe and Australia during the year just ended were very large, exceeding by a large amount the shipments in the two past years, and not being far behind the shipments in 1877. For the sake of comparison we give the last five years :

	Superficial feet.
1876	192,975 772
1877	215,173,920
1878	197,002,364
1879	152,349 000
1880	210,012,009

The improvement in the English wood market early in the year gave an immense impetus to the shipment of deals the past season, and, as is seen above, nearly sixty million more feet were sent forward than in the previous year with the result that the market was overstocked, and prices, in consequence, fell.

The stock of deals on hand now is comparatively small,—being in the vicinity of twenty million feet, and as there is no immediate demand the shipments for some time will be very light. A very busy season is expected next year, however. Lumbering operations are being carried on on an unprecedentedly large scale all over the Province, and should the present depression in the home market prove to be only temporary the year 1881 should prove a memorable one in the deal trade

LEATHER MANUFACTURES.—The Amherst *Gazette* says :—The manufacture of various kinds of leathers and their products form an important part of the business of our town. Mr. Casey now employs fourteen hands in his tannery, and the leather on hand, in various stages of manufacture, represents a large value. He has 1,000 sheep-skins, which he is commencing to make into coloured roans. His sales of leather to one concern in the last three months amounted to $3,300. Mr. R. Lusby also has 1,000 sheep-skins for his coloured roan factory. The Amherst Boot and Shoe Company has its usual number of hands, and is rapidly converting the leather into boots and shoes. Mr. J. J. Leonard has begun an industry which is new in the Maritime Provinces—the manufacture of kid mitts. They are made of finely finished stock, prepared by himself, and the stitching is neatly done by Miss Sibley. They compare favourably with goods of the kind made elsewhere, in all respects, and we hope buyers will give them the preference to imported ones. Mr. L. is turning out 78 pair a week. The harness shops of Messrs. Read, Fraser, and Sharp also use considerable quantities of harness leather. Among the establishments in the county, outside of Amherst, devoted to the leather business, the principal one is the steam tannery of Messrs, Upham & McCale, Parrsboro, which has lately opened with facilities for a large business.

WOOLEN MANUFACTURES.—The value of the annual product of the woolen mills in the Dominion of Canada is estimated at $7,000,000. The *Monetary Times* has received estimates from 79 mills whose products amount to $4,250,000. The other mills on this Ontario list will turn out perhaps $700,000 worth of goods. The Quebec mills named turn out annually close upon $200,000 worth. This is exclusive of custom mills and small factories, many of which turn out coarse cloths. The Almonte *Gazette* in reviewing the list of Ontario mills, says :—The total product of Almonte in this line, is $530,000 per year. Sherbrooke stands at the head, with a product of $640,000 a year, Almonte being the next highest. The position to which our town has attained as second in the Dominion in this important branch of industry, is one of which we should all be proud. When the new worsted factory and Sheard & Thoburn's flannel factory are in operation—and that will be in a month or two—we will be ready to change positions with Sherbrooke, and take the same place for quantity that we now hold for the quality of our woolen products.

A NEW ARTICLE OF EXPORT.—Several car loads of sawdust have been shipped lately over the St. John and Maine Railway. It seems that some one in Boston is building a very large refrigerator and he finds it to his advantage to bring the sawdust from New Brunswick.

IMPORTANT STATISTICS.—The following is a statement of exports from Canada into Chicago by lake during the seasons o 1879 and 1880 :

	1879.	1880.
Lumber	494,000	755 000
Ties	none	409 588
Posts	21,375	76,234
Telegraph poles	3,174	15,458
Tan bark	921	3,865
Wood	none	495

Statement of exports from Collingwood to Chicago by lake during the season of 1880 :

	1880.
Lumber	none
Ties	103,663
Posts	27,533
Telegraph poles	1,204
Tan bark	934
Wood	none

By a comparison of the above figures it will be seen that Collingwood shipped to Chicago during the season of 1880, one-quarter of all the ties; over one-third of all the posts, one-thirteenth of all the telegraph poles, and nearly one-quarter of all the tan bark received at that port by lake during the season.

SHIPPING AT ST. JOHN.—The St. John *Globe* gives the following statement of shipping on the registry books, St. John, at the close of each year during the last quarter of a century :—

Year.	No. of Vessels.	Tons.
1856	585	135,713
1857	543	138.669
1858	497	114.457
1859	489	112.420
1860	492	123.425
1861	486	137,873
1862	475	135 247
1863	521	174,135
1864	570	185,700
1865	628	203,783
1866	612	195.199
1867	640	186 300
1868	682	196 018
1869	703	203.660
1870	734	214.814
1871	767	226,727
1872	814	246 485
1873	806	247.228
1874	808	263 410
1875	802	263 204
1876	805	280 073
1877	776	279 636
1878	753	276 272
1879	738	281.101
1880	700	275,879

SITUATION WANTED.

SCOTCHMAN, CAPABLE OF RUNNING A SAW Mill any capacity, 18 years experience; best of references. Address, Editor LUMBERMAN.

AUCTION SALE

—OF—

Saw Mill, Wood and Iron Working Machinery.

JOHN McFARLANE & CO. HAVE RECEIVED instructions from Wm Dingman & Co to sell at their Warerooms, 55 Front St. East,

On Tuesday, the 18th of January,

the whole of their stock, consisting of Stearn's No. 3 Circular Mill, Log Canter, 68 h.p. Engine, Planers, Drills, saws, &c., &c. Catalogue on application.

HAYTER STREET

Wood Turning & Sawing Factory

33 Hayter Street, Toronto.

JAS. F. HAINES,

WOOD TURNING,

BAND & SCROLL SAWING,

SHAPING, &c., &c.

Piano and Organ Fret Sawing

a specialty.

All orders executed on the shortest notice.

Central Prison Industries.

Offers will be received by the undersigned up to noon of

Thursday, the 20th January, instant,

FOR

1500 Cords of Pure Hemlock

—AND—

MIXED SOFT WOOD,

in equal quantities, (500 cords to be cut) to be delivered in the CENTRAL PRISON BRICKYARD, TORONTO, on or before the 15th of May next.

J. W. LANGMUIR,
Inspector

Office of
Inspector of Prisons & Public Charities,
Parliament Buildings, Toronto.

MUSKOKA

Slide, Dam & Boom Company

Tenders for the following works on the Muskoka waters will be received until 1st. of February next:

1. Slide Dam at Mossom Lake
2. Piers, Booms at Cattaraqui Rapids
3. Piers and Booms at Lake
4. Piers, Booms and Cribs at Bala
5. Slide and Piers at Gravenhurst
6. Piers, Booms and Cribs at Muskoka River
7. Slide at Hall's Falls
8. Slide at Gray's Chute
9. Booms and Piers at Mary Lake
10. Booms at High Falls
11. Piers, Booms, and Cribs at Muskoka Lake
12. 400 pieces of Timber at Gravenhurst, Muskoka Lake.

Works to be completed before the opening of navigation, 1881. Tenderers must give security. The lowest or any tender not necessarily accepted.

Plans and specifications can be seen after 15th. of January at the office of

R. DOLLAR, Manager.
BRACEBRIDGE

CHAS. M. LARSEN

Manufacturer of all kinds of Lacquered and Enamelled Woodware, Turning and Carving in

WOOD, HORN, AND IVORY.

BILLIARD BALLS

Turned and coloured a specialty.

Meerschaum and Amber Goods repaired in first class style.

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For FURNITURE, PIANOS, ORGANS, etc., the best and most ornamental Castors in the market. They greatly improve the tone of musical instruments

RHEUMATISM, NERVOUSNESS, SLEEPLESSNESS cured by insulating beds with them.

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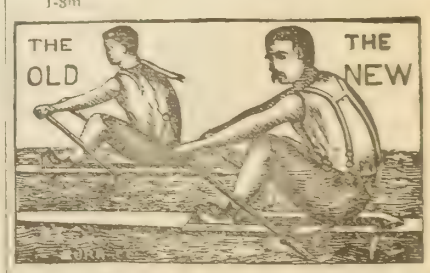

The UNIVERSAL SUSPENDER.

SOME REASONS why they are the best:—

1st.—No Elastic requied.
2nd.—Is slack when stooping.
3rd.—It never slips off the shoulders.
4th.—Sold at prices of common suspenders.

Manufactured by C. E. RAMAGE & CO.

90 BAY STREET, TORONTO.

Learning to Skate.

It is a mistaken idea that skating is similar to dancing, and as readily acquired. The surface of the ice is dissimilar to that of a waxed dancing floor, and the inch or two height of the skate—the difference between the runner of the skate and the sole of the shoe in bearing surface; the fine balance of the body required to preserve the equilibrium; the knowledge of the right swing and place of the unbearing leg; the position of the head and shoulders, and the direction of the eyes—all relating to the centre of gravity and governing the direction of the skater, are matters to be studied. Knowledge to be acquired, and to be carefully observed in all movements in skating, which is mathmetical to a vast extent upon the ice skate, and perfectly so upon the Plimpton roller skates, which cannot be forced out of a true curve or straight line, while the ice skate can. Therefore it becomes every one who anticipates the acquirement of the art of skating to enter upon it not only as a pastime, but with the certain knowledge that the acquirements of the various movements demand close study and application. "Practice makes perfect," particularly in skating.

We do not wish to discourage those who would learn to skate. On the contrary, a knowledge of the obstacles to be surmounted communicated at the outset will prevent discouragement later on.

Remembering that the possessions that most endeavour are most dearly appreciated, you will realize that the skating movements that demand the most labor are prized most highly when acquired. Go at skating with an inquiring turn of mind. Ask why the unemployed leg should be behind in executing the outside edge roll forward and why in front in the inside edge backward, and the many other curious questions arising in the mind of the learner, and solve the riddles, or ask others to do so, until the law is explained, and the proper position will be involuntary.

Whatever you do, do it well, and learn but one movemsnt at a time, taking the simplest first. This would seem to be foolish advice, but look into it. There are skaters who cannot skate the inside edge roll forward or backward who pretend to do the Bishop 8, Mercury, flying scud, grape vines, one foot 8 and loops, in each of which the inside edge must be introduced to render the movement complete. There are many who have educated the right foot to the execution of certain movements, and kept the left in ignorance. These are not good skaters. Make your skating perfect by commencing on the first round of the ladder, get firm hold of that before starting for the next, so that when the top is reached you can retrace your steps when necessary. The simplest movement, the plain forward, as well as the edges, enter into every complicated combination. You might as well attempt to read without the knowledge of the alphabet, as to skate any movement without proficiency in the rudiments. Therefore perfect yourself in the plain forward, then both the inside and outside edges forward and backward, then the threes and you have the elements of all the movements that can be formed upon skates. In respect to

PRACTICE.

we would recommend its commencement in the house, in order that you may accustom yourself to the "feel" of the skate and get some idea of "balance."

"Having properly adjusted your skates stand with your heels together and feet at right angles to each other, body erect, leaning slightly forward, arms hanging loosely at the side, eyes gazing at some object twenty feet or more in advance, legs touching each other, shoulders thrown back and breast expanded full forward.

Never look down at your skates, or you will throw yourself out of position and balance. Study this rule and accustom yourself to observe it.

2. In skating, the propelling power generally comes from the un-bearing leg or the leg which does not bear upon the ice; therefore place the heel of the right into the hollow of the left foot, take one short step forward upon the right, at the same time swinging the body well forward upon the right foot, making that foot bear the weight of the body.

3. Bring the heel of the left to the hollow of the right; advance one step with the left foot, throwing the body forward upon the left.

These movements constitute "plain forward" skating. Practise thoroughly until it can be done with ease, and without liability of the body swinging to either side so as to lose the perfect balance. If your left is weaker or more disinclined to work than your right foot, use it until it is taught to perform its work and become as perfect as the right.

After practising this movement until you have reached a run, keeping the body well over the skate, the toes well turned out, and not allowing the off foot to touch the floor, take the next movement.

4. Place the heel of the left opposite the hollow of the right with the weight of the body upon the left. Raise the right carefully and carry it over the left to the opposite side, throwing the weight of the body upon the right foot. Raise the left and carry it to the first position. Repeat this, moving in a circle, going from right to left. Reverse the direction by placing the left over the right and walking in a circle.

This movement is called the "lap-foot" forward, and is a material aid to the movement which follows. Practise it thoroughly before attempting the next, and don't be afraid to lift your feet well up and bend the knees as in a walk around.

5. Stand with your toes turned in and your feet at a right angle to each other. Raise the left foot about five inches from the floor, slightly bending the knee, carrying the left well over and in front of the right, and placing it upon the floor in this position throw the weight of the body upon the left foot. Raise the right and carry it well over and in front of the left. Continue this movement until perfect and you will have accomplished the "cross-roll" forward.

This movement needs thorough practice to accustom the ankle to the turning in of the foot.

6. A backward movement, necessitating a different position of the body. Stand with the shoulders thrown backward, the body leaning slightly backward. Be very careful to observe the position, and if you desire to spoil the movement and lose your balance, lean forward. Place the heel of the left opposite the hollow of the right, the weight of the body upon the right. Raise the left and carry it behind and well across the right, letting the weight of the body come upon the left foot. Raise the right and carry it to first position. This will take you to the left, continuing which will form a circle. Perform the movement in the opposite direction by placing the right behind the left, instead of the left behind the right. Above all, lean backward, because it will preserve your equilibrium and is the proper position of the body. This movement is the "lap-foot" backward and needs much practice.

7. Heels together, feet at right angles and weight of the body upon the right foot. Carry the left back of and well over to the opposite side of the right, throwing the weight of the body upon the left. Raise the right foot and carry it around, back of, well over and to the opposite side of the left. Lean backward and practise this thoroughly until it is as easy as walking, and you will have accomplished the "cross roll" backward, one of the most beautiful movements upon skates, when properly executed.

Other movements can be practised in the same way in the house, but if the learner will perfect himself in these, he will find the practice of the utmost value to him, and the performance of the movements on ice a simple matter. Let body and limbs be elastic, knees readily bent, ankle loose, arms at the side, hands not clutching at vacancy, but open with the palms facing the body, knee of the performing leg always slightly bent, every movement lightly and gracefully executed, without apparent effort; and above all, *never look down at your skates.*

A FOUR-YEAR-OLD child, saying her prayers at her mother's knee, having concluded as usual, with "God bless papa and mamma, grandpapas and grandmammas, uncles and aunts," etc,, gave a great sigh, and said: "O mammy dear, I do wish these people would pray for themselves, for I am so tired of praying for them."

THE 3-year-olds belonging to Lord Falmouth did so badly in all the great races of the season that one is hardly prepared to find him standing for the fifth or sixth time in the last ten years at the head of the winning owners in England. But thanks, in the main to the eight victories of his 2-year-old filly, Bal Gal, who has won more money than any animal of her age ever did before, the occupies this position with a total of £16,-061 won in twenty-one races. Of this total Bal Gal has secured more than half.

Further from Mauna Loa.

CONTINUANCE OF THE GREAT VOLCANIC ERUPTION IN HAWAII.

The Chinese merchant steamer Ho Chang, which arrived at San Francisco on the 16th ult., brought the Hanolulu (Hawaii) *Gazette* containing further details of the great eruption of Mauna Loa and other volcanoes near by. Clouds of dense smoke had hidden the mountain the greater part of the time, but those who had visited the scene described it as grand and awful beyond the power of words to express. The eruption has now continued for about six weeks, and the lava stream had reached the woods near Hilo. From Kilena it is reported that the stream has changed its direction, and the Kapela sugar plantations, for a long time regarded as in danger, are now considered safe. Reports are up to the 6th of December, and show the most active flow now is that running from near the summit of Mauna Loa in a northerly direction towards Mauna Loa. Clouds of smoke envelop the mountain, but at times they lift, showing the red river of lava moving down the mountain. On Nov. 20, which was a very clear day, the eruptions were plainly seen from their craters. Those watching the mountain from Hilo on that day about dusk saw a sudden explosion from one of these craters. A vast column of material was suddenly thrown several hundred feet in the air; several days after, another clear day showed that the summit of the mountain has undergone much change. Three craters, each separated by about a mile, were seen, and each seemed intensely active. A correspondent who went up on the mountain near the base of the flow says: "The lava has flowed about 25 miles towards Hilo, and is now in the neighbourhood of 20 miles away. It is from a quarter to half a mile on the upper part of its course, and lower from three-quarters to a mile wide. It has entered the woods on one side, and as it rises high above '55 flow,' which is specially high at this point, its motion looks threatening enough. I did not see any portion of it in motion at the lower end, but concluded that the motion was at the centre and of a rotary nature, rolling masses of clingstone to either side and forming great piles as it rushed along. I saw no trees burning, though the stream had advanced into the upper road. My theory is that the head of the stream is not molten, the liquid lava being underneath, and that progress is made now, although not open, running down the mountain, thereby throwing congealed and congealing masses ahead like puppet balls, pressing down trees and immediately burying them as the river of stones moves on. While all this is going on old Kilau Mountain maintains its ancient reputation, and its three lakes are in most intense activity, each vieing to surpass in brilliancy and beauty former displays. Streams frequently flow from them, but with no regularity." Parties are visiting the new eruption every day, and from this side can approach the stream and ride along almost its entire length of 18 or 20 miles within a few feet of it. The combined length of the two streams, the northern and the eastern, cannot be less than 40 miles. One party has even ventured to sleep on a spur of the new stream; enjoying its warmth and a good nap.

Inaction.

Great evils result from physicial inaction. It is well known that through the whole human system, strength and development come only by exercise. Every unused muscle shrinks in size and loses its force, and the man or woman who lives chiefly a life of passive repose will gradually lose the power as well as the desire for activity. This, however, is by no means the whole of the evil involved. The connection between the mind and the body is very intimate, and the mental faculties cannot obtain their full power, nor the character attain it highest excellence, unless the body be kept in healthful condition by salutary exercise. Pure air and regular physical exertion are necessary in order to think clearly, to decide wisely, to reason acutely, to plan with discretion, and to execute with vigour. Strength of will depends largely upon strength of muscle, and he who is weak and flabby in the latter will in all probability be feeble and irresolute in the former.

THE Duchess of Westminister died of Friday evening at her residence at Bournemouth.

Cold-Footed Woman.

Says Dr. J. H. Handford in the "Laws of Life:" "The question is sometimes asked 'Who ever knew a woman to have warm feet?'" The Dr. thinks this is a somewhat extreme view of the matter, but still he decidedly takes the ground that women, as a class, are victims of cold extremeties. With the gallantry that impels every true man to defend womankind, I at once thought when I read the Dr.'s opinion that it must be explained on the principle that cold hands and a warm heart go together. Probably the feet obey the same law of contrariety. But alas! this pleasant theory is run out. The Dr. ascribes the cold feet of womankind to the foolish habit of wearing thin and tight boots. For this folly man is chiefly responsible. Almost universally, human beings of the male persuasion adore small feet in women. It is an absurd thing to do, but mankind are absurd in many respects. I never could see the special charm of a small foot, but I never was, technically speaking, "a lady's man." A pretty face never inspired me with rapture, unless there were intellectual and moral qualites to match. If a woman has a good mind and a good heart; she may wear a No. 10 boot for all that I care. I would look at the eyes beaming with intelligence and goodness, and never think of her big feet. But it is different with the majority of men. And woman, with that readiness to sacrifice herself to please the other sex, which is characteristic of her, will endure untold tortures to secure the winning charm of "dear little feet." Dr. Handford very ungallantly says: "The false idea of the necessity of a small hand and foot may depend on the corresponding smallness of the brain." I would rather ascribe it to the largeness and softness of the heart. But, be that as it may, the prevailing custom results in cramped, crippled, deformed, cold feet, and the sooner it is abandoned the better it will be for female health and comfort.

The Irish Secretary.

The face of Foster, the Irish secretary, is not, says *Pan*, an exact index of his mind. He looks unbending, even morose. It is as if he put on the grimace of what he would wish to appear. There is an air of faded ruggedness about his large and irregular features. His bridgeless nose is thick and round in the region of the nostrils, his cheeks are wide and full, his anxious eyes are deep-set beneath a massive forward brow seamed with thought and half covered with pale patches of hair, combed down carelessly from right to left. He wears a ragged red and gray beard and a mustache—which gives the chief point of character to his face—cut close to the top of the upper lip, straight across from corner to corner of a wide mouth. Tall and somewhat fleshy, with large feet and hands, and long legs that are loose from knee to ankle, he walks with quick, uncertain strides, and sits with his body forward, toward the edge of the seat, his chin on his breast, his eyes cast down, and his hands clasped across the region below the bottom of his waistcoat.

For a man 62 years of age, Mr. Foster displays extraordinary physical vigor. In the execution of his office he seems indifferent to fatigue and impervious to its effects—unless, indeed, an occasional nap on the treasury bench can be counted against him. His manner of answering questions is short, to the point, and in extreme cases, somewhat imperious. His ordinary voice, however, falls pleasantly upon the ear; it is that of a scholar and a gentleman; and when roused to an effort of oratory, few men in the house are more impressive than the rough but accomplished Yorkshireman and worsted manufacturer. Five years ago he was at the zenith of his fame, and might have been prime minister of England but for his inveterate habit of shilly-shallying. He could not make up his mind that the party would follow him.

LORD BEACONSFIELD sent a presentation copy of "Endymion" to the Queen, to which she devoted immediately her first mornings after her return from the Scottish Highlands. The only other ladies who received this distinction were Lady Chesterfield, who is a special friend of Lord Beaconsfield, and whose late husband was an associate of his in his youth, and Lady Bradford, who is her sister. Lord Beaconsfield visits their country seats every season.

THE wife and sons of the Russian grand duke Nicholas are guests of King George at Athens.

Muskoka District.

LUMBERMEN'S SUPPLIES.

To meet the demands of the LUMBERMEN IN THIS DISTRICT I have opened out a

WHOLESALE SUPPLY DEPOT

At BRACEBRIDGE, where everything in the shape of Lumbermen's supplies or Furnishings, can be obtained in large or small quantities, at wholesale rates.

Outside quotations or correspondence solicited.

F. W. JEFFERY.

Guaranteed to grind any kind of grain, fine or coarse, equally as well, as a four foot mill stone.
WATEROUS ENGINE WORKS CO., BRANTFORD, CANADA.

MILLSTONE CHOPPING MILLS FOR LUMBERMEN.

Wil grind as fine as any four-foot stone.

Lumbermen, grind your own Horse Feed.

Make your own Flour with our Portable Grist Mill.

PRICE, Grist Mill complete, $600. Capacity, One and a half barrels of good flour per hour.

Send for particulars, address

Waterous Engine Works Co.,
Brantford, Ontario, Canada

BRYCE BROTHERS,

ST. LAWRENCE

LUMBER YARD!

Corner Berkeley and Front Streets, Toronto.

Planing Mill, No. 57 Ontario St. - - - - Mills at Elmvale.

WHOLESALE AND RETAIL DEALERS IN

LUMBER, SASH, DOORS, BLINDS, &c.

Largest and Best Stock of Lumber in the City at Lowest Prices.

WE HAVE CONSTANTLY ON HAND A LARGE STOCK OF

SASH, DOORS AND BLINDS, ETC., ETC.,

Which we sell at Lower Rates than they can be had anywhere else in the City,

SPECIAL ATTENTION GIVEN TO FILLING OF BILLS OF EVERY DESCRIPTION.

Houses built on easy terms of payment. Houses to rent or for sale in any part of the city

☞Best price paid for Lumber of all kinds, cedar posts, &c.☜

G. B. MEADOWS,

Manufacturer of and Dealer in

Lumbermen's Supplies,

Hotel & General House Furnishing Goods, Cooking Ranges & Stoves.

HOT AIR FURNACES, &C.,

Wholesale dealers in Tinware; Sheet Copper and Brass Goods, Coal Oil and Lamp Goods. ☞Contractor for Builders' Job work.

DUNLOP STREET, Corner Railway Square

Barrie, Ontario.

M. BRENNEN,

MANUFACTURER AND WHOLESALE DEALER IN

Lumber, Lath and Shingles,

63, 65 and 67 King William-st.,

HAMILTON, ONT.

Mills and Timber Limits at Silver Creek, Tiago P. O., Ont.

Bill Stuff cut from 10 to 60 feet. Cedar Posts on hand.

Orders sent to M. Brennen, Tiago, P. O., will receive prompt attention.

THE GENUINE

Silver-Steel, Lance-Tooth Cross-Cut Saw!

It stands without a rival. and is the fastest cutting saw in the world. It has beaten the best Canadian and American-made saws 33½ per cent. in every contest. Its superiority consists of its excellent temper. It is tempered under the Secret Chemical Process, which toughens and refines the steel. It gives a finer and keener cutting edge, and will hold it twice as long as any other process. We have the sole right for this process for the Dominion of Canada.

None genuine that are not like the above cut, with registered trade mark with the word "The Lance," and Maple Leaf with our name. Price $1 per foot.

CAUTION. — Beware of Counterfeits. There are inferior counterfeits on the market, which are intended to be sold at a high price upon the reputation of this saw. We will send to any address a saw exactly like any counterfeit, warranted equal in quality or no sale, at 60c. per foot. Therefore do not be humbugged into paying a first-class price for a second-class saw. A fact to bear in mind is that if the material and temper are not of the very best quality the shape of the teeth amounts to nothing. A saw, like a knife, will not cut fast without it will hold a keen, cutting edge. We have cut off a 14-inch sound basswood log in eight seconds with this saw.

Manufactured only by

SHURLY & DIETRICH,

Manufacturers of Saws, Plastering Trowels, Straw Knives, &c., &c.

GALT, ONTARIO.

December 10, 1880.

ALLANDALE JUNCTION HOTEL.

Travellers by Northern Railway have 15 to 20 minutes by all trains, for refreshments. Solid meals Tea and coffee at counter. Fine brands of liquors and choice cigars.

E. S. MEEKING Proprietor

ST. LOUIS HOTEL.

THE RUSSELL HOTEL CO., Proprietors.

WILLIS RUSSELL, Pres., Quebec.

This hotel, which is unrivalled for size, style and locality in Quebec, is open throughout the year for pleasure and business travel.

ST. LAWRENCE HALL.

PORT HOPE

Is noted for its superior home-like comforts—a well kept table, equalling the best Hotels in Toronto, and large, well-furnished rooms. Good sample rooms on ground floor. Walton Street, Port Hope.

Wm. MACKIE, Proprietor.

FRASER'S HOTEL.

GRAVENHURST, ONT.

HENRY FRASER, proprietor (successor to Dougland Brown.) Mr. Fraser having purchased and thoroughly renovated and refitted that old established hotel, so long and popularly kept and owned by Dougald Brown, in the village of Gravenhurst, is now in a position to attend to the wants of the travelling and general public. Parties *en route* to the Muskoka District, will find "Fraser's" a comfortable stoppi place. The Bar and Larder are well furnished. Convenient Sample Rooms for Commercial Men. Good Stabling and attentive hostler. Free 'bus to and from trains and steamboats.

HOTEL OTTAWA,

No. 21 North Side King Square.

ST. JOHN, N. B.

E. COSMAN, - - Proprietor.

Terms, $1.00 to $1.50 per day.

THE RUSSELL HOUSE,

OTTAWA,

JAS. A. GOUIN, - - Proprietor.

IS THE

Favourite Resort of the Leading Public men of the Dominion attending the annual Sessions of Parliament.

Ministers of the Crown, Senators, Members of Parliament, Public Officials, as well as those having business with the various Departments of the Government. It is also the head-quarters of those having dealings with the princely Lumber Manufacturers in the great Pine Valley, of which Ottawa is the acknowledged centre.

THE RUSSELL HOUSE being central, almost abutting on the magnificent PARLIAMENT and DEPARTMENTAL BUILDINGS—the pride of the Country—is thus conveniently situated for those visiting the City on public business. But the location is also everything that could be desired alike for the man of business and the man of pleasure. A few minutes walk brings the guest of the Hotel within reach, not only of all the principal business resorts, but also of the most splendid Mountain and Valley Scenery that can be seen anywhere, as also of the two almost unrivalled Waterfalls—the Chaudiere and Rideau—and of the extensive Manufacturing Establishments and Depots of the leading Lumbermen. But, besides the beautiful scenery, which, it may be mentioned, includes the magnificent Ottawa and two of its grand tributaries—the Rideau and the Gatineau—there are in the immediate neighborhood, beautiful Lakes and apparently never-ending woods, which afford opportunities for the finest Fishing and Shooting that can be obtained on the Continent.

THE RUSSELL HOUSE affords excellent accomodation for 300 guests; its table is abundantly supplied with Viands of the choicest description, in season, and nothing is left undone to make every visitor feel comfortably "at home."

☞Omnibusses meet the Arrival of every Train and Boat.

MARKET REPORTS.

CANADA LUMBERMAN OFFICE,
TORONTO, 13th Jany. 1881.

Business has been steady during the past week. Orders from western villages and towns, however, are coming in freely, and stocks are keeping up from northern and eastern arrivals. Building continues fairly brisk, no complaints of workmen remaining idle for want of work. Dry lumber is getting somewhat scarce. There will be very little on hand by April. Reports from all quarters relating to logging and getting out square timber are most favourable. Good sleigh ing all over the country from Sarnia to Cape Breton.

TORONTO.

WHOLESALE RATES.

Mill culls,	$ 5 50	@	7 00
Shipping cull stocks	10 00	@	11 00
Shipping culls, (in. box,)	8 50	@	10 00
Dressing inch,	11 50	@	13 00
Flooring, 1¼ & 1½ in,	12 00	@	13 00
Jois ing and scantling,	9 50	@	10 50
Mill run sidings	12 00	@	14 00
Pickings	17 00	@	20 00
Clear and pickings	25 00	@	30 00
Lath	1 25	@	1 40
Shingles, No. 1	2 10	@	2 20
No. 2	1 40	@	1 60

LONDON, ONT.

RETAIL RATES.

Common Lumber	$12 00	@	13 00
Stock boards	14 00	@	15 00
Clear in. and 1½ to 2 in.	25 00	@	30 00
Bill stuff, up to 16 feet		@	14 00
do. over 16 feet $1 for every two feet extra.			
Flooring and vessel lumber.		@	20 00
Dressing lumber rough	17 00	@	18 00
Lath, per 1000 feet		@	4 25
Shingles No, 1, per M		@	2 75
do, per square		@	2 00

OTTAWA.

The following are quotations in the Ottawa market :—

12 in. stocks, good	$18 00	@	20 00
12 " S. culls	10 00	@	10 50
10 " good	16 00	@	18 00
10 " S. culls	9 50	@	10 50
Strips, good	17 00	@	20 00
" culls	6 50	@	7 50
Sidings, 1¼, 1½, and 2 in., good	23 90	@	26 00
" " culls	9 00	@	10 00
Lath (₩ 1,000 pcs.)	0 00	@	1 00
Deals (₩ Quebec standard) 1st	0 00	@	110 00
Deals (₩ Quebec standard) 2 nd	0 00	@	65 00
Deals (₩ Quebec standard) 3rd	0 00	@	58 50
Cull deals (₩ M. ft.)	6 50	@	8 59

CHICAGO.

YARD RATES.

First and second clear, 1@ 1¼ in.	$43 00
First and 2d clear, 2 in	45 00
Third clear, 1¼ @ 2 in	38 00
Third clear, 1 inch	35 00
1st and 2d clear dressed siding	20 00
1st com. dressed siding	18 50
Second common	17 50
Flooring, 1st com. dressed	34 00
Flooring, 2d com. dressed	32 00
Flooring, 3d com. dressed	24 00
Box bds, A. 13 in. and up	43 00
Box bds, B, 14 in. and up	37 00
Box boards, C	26 00
A stock boards, 10 @ 12 in., rough	37 00
B stock bds, 10 @ 12 in	33 00
C stock bds, 10 @ 12 in	28 00
Common stock boards	17 00
Cull boards	$10 00 @ 11 00
Fencing, No. 1	13 50
Fencing, No. 2	11 50
Common boards	11 50 @ 12 50
Dimension stuff	11 50
Dimension stuff, 20 @ 30 ft	12 50 @ 20 00
Small timber, 4 x 4 to 8 x 8	12 00
Round posts, cedar	15 00
Pickets, dressed and headed, flat	21 00
Pickets, do., square	21 00
Pickets, rough,	15 00
Clear shingles	3 25
Extra "A" shingles	2 90
Standard "A" dry shingles	2 56
Shaded "A" shingles	1 10
No. 1 shingles	1 50
Cedar shingles	2 50
Lath, dry	2 50

BUFFALO.

We quote cargo lots :

Uppers	$35 00	@	40 00
Common	16 00	@	19 00
Culls	11 00	@	12 00
Assorted lumber in car lots or boat loads :			
3 uppers 1 inch	$	@	40 00
Do. 1¼ and 1½ in	40 00	@	42 00
Do. 2 in	45 00	@	47 00
Do. 2½, 3 and 4 in. special			
Pickings 1 inch	28 00	@	30 00
" 1¼ and 1½ in	33 00	@	35 00
" 2, 3, and 4 in., special	22 00	@	00 00
Shelving	22 00	@	24 00
Cutting up	22 00	@	24 00
Sidings, com., 1 in	16 50	@	17 00
" 1¼ in. and over	17 00	@	20 00
Common, stocks	16 50	@	17 00
Box, all thicknesses	13 00	@	14 00
18 in XXX shingles	3 60	@	3 70
18 inch clear butts	2 60	@	2 70
Lath	1 75	@	1 80

We quote wholesale prices of hardwood lumber, delivered on cars or boat :

Walnut ½ inch clear	$65 00
⅝ inch, 1sts and 2nds	70 00
¾ inch, 1sts and 2nds, 14 feet coffin stock	73 00
1 inch 1sts and 2nds	75 00
1¼, 1½, 1¾, and 2 inch	77 00
2½ inch and thicker	80 00
counters	150 00
Newels 5x5 to 10x10	95 00
common in. & thicker	55 00
culls, inch	35 00
culls, 1¼ inch	35 00
White ash, Ohio 1st and fine 2nds	35 00
Whitewood, inch	30 00
⅝ inch	28 00
¾ in coffin stock, 14 ft	30 00
square, 4x4 to 10x10	33 00
Chestnuts, 1sts and fine 2nds,	32 00
Maple	25 00
White oak, Ohio	35 00
Cherry, inch and thicker	55 00
Butternut	50 00
Hickory, best Ohio	35 00

CLEVELAND.

ROUGH LUMBER.

Uppers, thick	$45 00		
inch	42 00		
Box, thick	36 00		
inch	32 00		
2½, 3 and 4 in clears special			
Flooring strips, 6 in, No. 1	34 00		
2	24 00		
Fencing strips, 6-in, No. 1	16 00		
No. 2	14 00		
Select common, thick	28 00		
inch	24 00		
Common	15 00		
Culls	12 00		
B. bds No. 1 12 in	25 00		
No 2	16 00		
No	14 00		
No 1 18 ft	20 00		
No 2 18 ft	18 00		
No. 3 18 ft	15 00		
Bill stuff to 18 ft	13 00		
Bill stuff over 18 ft. adds 75c to $1 per ft. per M.			
Shingles, XXX	3 60		
clear butts	2 60		
Lath	2 25		
Surfacing one side adds to the price of rough lumber	1 00		
2 sides	1 50		
Norway bds and strips	18 00		
common	13 00		

DRESSED LUMBER.

Flooring and drop siding clear	$40 00		
box	30 00		
select com	28 00		
common	20 00		
Siding, ½ in. bevel clear	00		
box	20 00		
select common	15 00		

Working lumber matching flooring and drop siding, $2 ; working ½ in. siding, $4.

OSWEGO. N. Y.

Three uppers	$40 00	@	43 00
Pickings	30 00	@	32 00
Pine, common	20 00	@	22 00
Common	14 00	@	16 00
Culls	12 00	@	14 00
Mill run lots	16 00	@	20 00
Sidings, selected, 1 inch	30 00	@	33 00
1¼ inch	30 00	@	38 00
Mill run, 1x10, 13 to 16 feet	16 00	@	20 00
Selected	20 00	@	25 00
shippers	15 00	@	16 00
Mill run, 1 and 1¼ in. strips	15 00	@	18 00
Culls, selected	20 00	@	24 00
1x6 select d. for clapboards	24 00	@	35 00
Shingles, XXX, 18-in. pine	3 00	@	3 75
XXX, 18 in. cedar	3 00	@	3 50
Lath	1 50	@	1 75

ALBANY.

FREIGHTS.

To New York ₩ M. feet	$ 1 00
To Bridgeport	1 25
To New Haven	1 25
To Providence	2 00
To Pawtucket	2 25
To Norwalk	1 25
To Hartford	2 00
To Middletown	1 75
To New London	1 75
To Philadelphia	2 00

Quotations at the yards are as follows :

Pine, clear, ₩ M	48@60
Pine, fourths	43@55
Pine, selects	38@50
Pine, good box	17@28
Pine, common box	14@17
Pine, 10 in. plank, each	38@42
Pine, 10-in. plank, culls	21@23
Pine boards, 10-in	25@28
Pine, 10-in boards, culls, each	17@18
Pine, 10-in. boards, 16 ft. ₩ M	28 00
Pine, 12-in. boards, 16 ft	28 00
Pine 12-in. boards, 13 ft	28 00
Pine, 1¼ in., siding, select	42 00
Pine, 1¼-in. siding common	18 00
Pine, 1-in. siding, selected,	40 00
Pine, 1-in. siding, common	16 00
Spruce boards, each	16
Spruce, plank, 1¼-in., each	20
Spruce, plank, 2 in., each	30
Spruce, wall strips, each	11@11½
Hemlock, boards, each	13
Hemlock, joist, 4x6, each	30
Hemlock, wall strips, 2x4	9½
Black walnut, good, ₩ M	85 00
Black walnut, ⅝-in	78 00
Black walnut, ¾-in	78 00
Sycamore, 1-in	28 00
Sycamore, ⅝-in	22 00
White wood, 1 inch and thicker	40 00
White wood, ⅝ inch	30 00
Ash, good	43 00
Ash, second quality	30 00
Cherry, good	60 00
Cherry, common	35 00
Oak, good	42 00
Oak, second quality	25 00
Basswood	25 00
Hickory	40 00
Maple, Canada	30 00
Maple, American	28 00
Chestnut	40 00
Shingles, shaved, pine m	6 00
" " 2d quality	4 50
Shingles, extra, sawed, pine	4 25
Shingles, clear, sawed, pine	3 25
Shingles, cedar, mixed	2 75
Shingles, hemlock	2 00
Lath, hemlock	1 50
Lath, spruce	2 00

DETROIT.

Yard rates, continue as follows :

Uppers, all thicknesses	$40 00	@	45 09
Selects	35 00	@	38 00
Fine common, thick		@	30 00
No. 1 common stock, 1x12	16 00	@	18 00
Common shippers, 1x12	13 00	@	14 00
Flooring, select		@	25 00
common		@	22 00
Roofing, matched		@	16 00
Siding, clear		@	24 00
A select		@	20 00
B common		@	16 00
Ceiling, select		@	30 00
common		@	25 00
Shipping culls		@	12 00
Mill cull boards		@	10 00
Dimension or bill stuff to 16 feet		@	14 00
18 to 24 feet		@	15 00
longer than 24 feet	16 00	@	20 00
Shingles, clear, 18 inch		@	4 00
clear, 18 inch		@	2 75
Lath		@	2 25

REID & CO., WHOLESALE LUMBER DEALERS. Lumber, lath, shingles, &c car lots to suit customers. Best culls in the market for from $6 to $7 per M.
OFFICE ON DOCK—Esplanade, foot of Sherbourne Street, Toronto

THE

Intercolonial Coal Mining Co.,

offer their fresh mineral bituminous Coal from their

DRUMMOND COLLIERY

F.O.B cars, deliverable at stations of the Intercolonial and Grand Trunk Railway.

Apply to

Intercolonial Coal Mining Co.,
26 St. Francois Xavier Street,
MONTREAL.

The coal is now being received at Toronto by several of the dealers—W. J. Keith, C. J. Smith and others

JOHN DOTY,
Esplanade Street, Toronto.

MANUFACTURER OF
MARINE ENGINES,
MARINE BOILERS,
Propeller Wheels & Steam Yachts
Send for Illustrated Circular.

G. T. PENDRITH,
GENERAL
MACHINIST.
59 Adelaide Street West,
TORONTO.

☞ Piano-stool screws a specialty.

READ THIS!

CHATHAM, Dec 2, 1880.
F. CRUMPTON.
Dear Sir,—The watch which I selected from your Catalogue was received yesterday, and I must say that I was greatly pleased with it ; in fact, if I had *personally* selected it, I could not have suited my taste better. It is just what I wanted. If I want anything in future, I shall know where to procure it at a reasonable figure.
Yours very truly,
J ——

Send for our new catalogue and price list sent post-paid on application.

F. Crumpton,
83 King-st. East,
TORONTO.

FOR READY-MADE CLOTHING

this House stands at the head, having manufactured clothing in Toronto

FOR OVER FORTY YEARS and always gave

satisfaction to customers.

THEY IMPORT THEIR OWN WOOLENS FROM EUROPE,

and manufacture the Clothing on the premises.

GENTS' ALL-WOOL SUITS, $7.50, $9.00 and $12.00.

GENTS' FINE WORSTED SUITS, $11.75, $15.00, and $18.00.

GENTS, SHIRTS, UNDERCLOTHING, TIES, GLOVES.

R. WALKER & SONS,

GOLDEN LION, KING STREET, TORONTO.

NOTICE. — Every old subscriber to *Grip* who sends in the name of a new subscriber with the money ($2), will receive a copy of this Almanac for himself, and one for the new subscriber. Names may be sent to Booksellers, or to Bengough Bros., Toronto.

RUPTURE CURED, AND DEFORMITIES Straightened by Mechanical Treatment—CHARLES CLUTHE'S Patented Spiral Truss. 16,000 in use, the essence of Mechanical Science for Cure of Rupture. Pad only one ounce, and cannot get out of order. Spinal Instruments new designs; very light, free motion. Club foot warranted to cure in one year, new instrument; no fail. See what parents say whose children were cured. No cutting; no pain. Send for Illustrated Circular.

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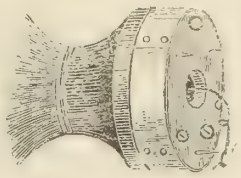

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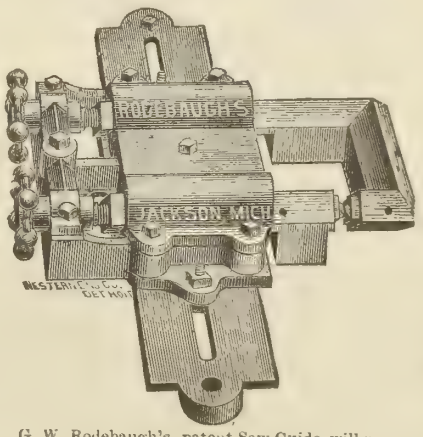

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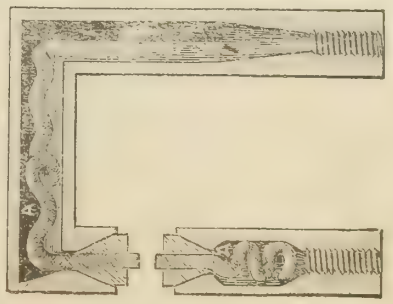

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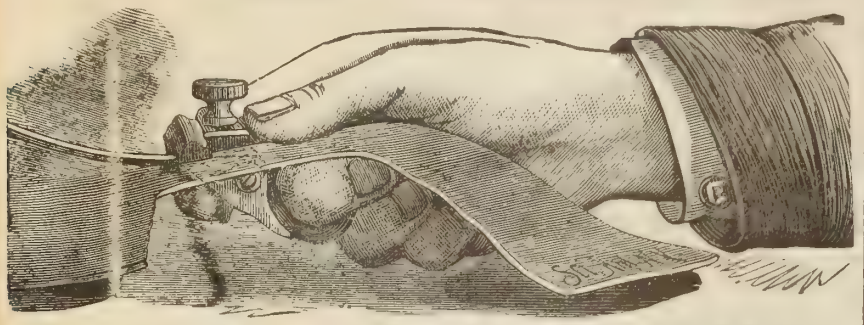

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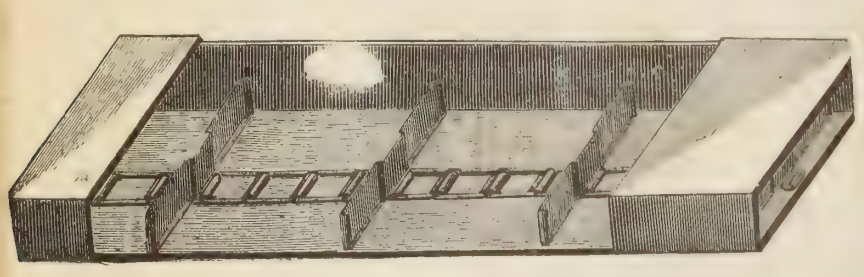

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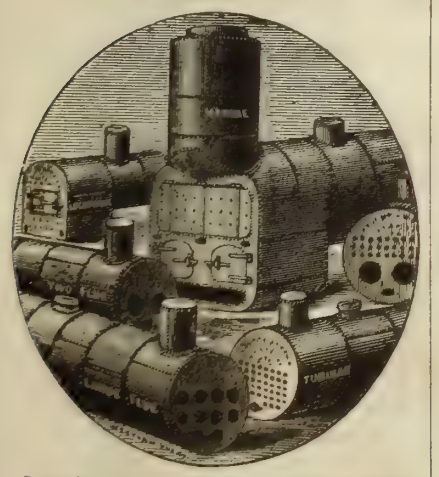

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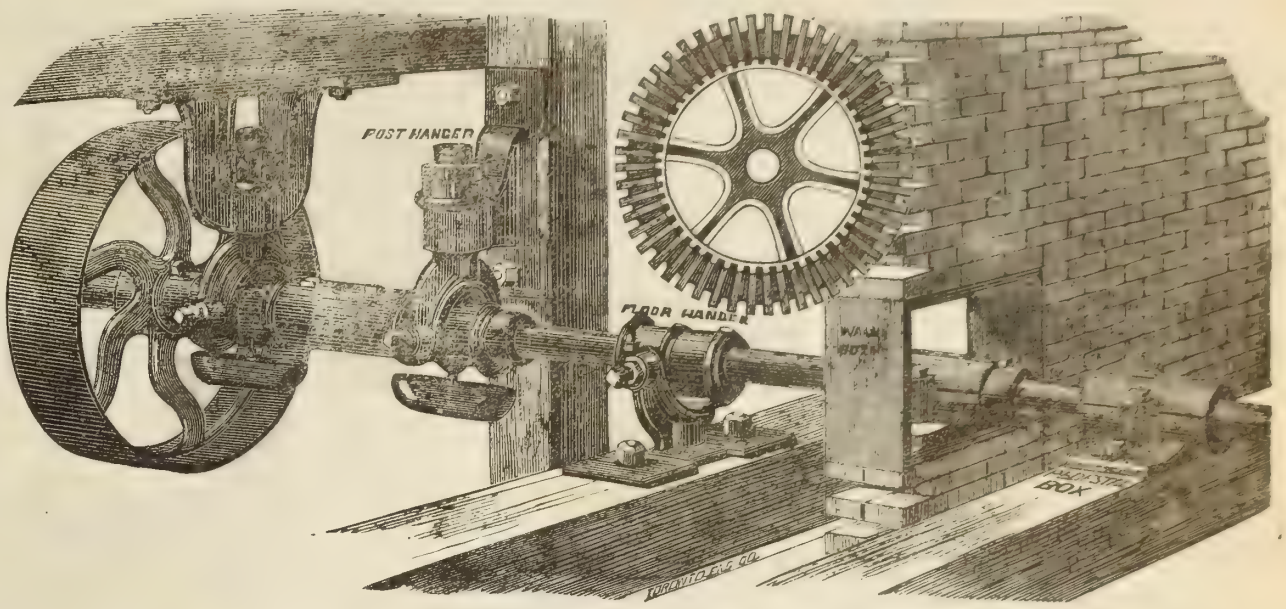

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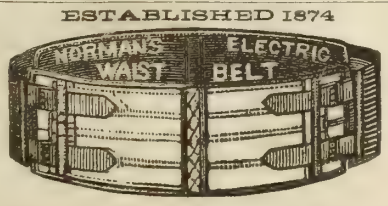

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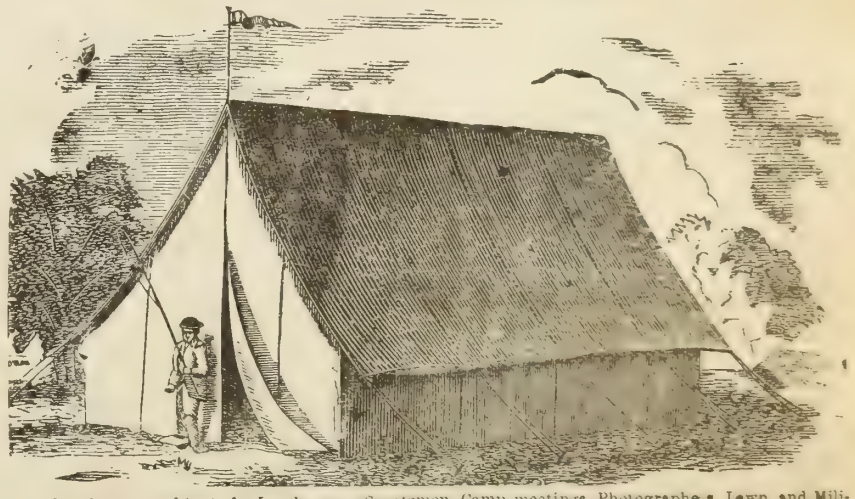

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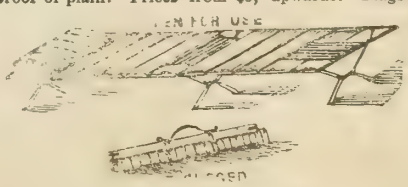

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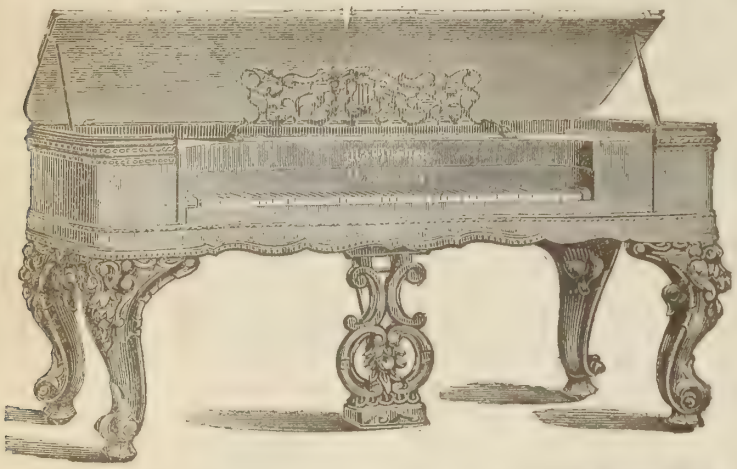

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The Bell Organ Manufactory is the Largest and Oldest in the British Empire, and the fact that we have sold nearly 15,000 proves that they are the best in the market. We guarantee all our Organs for five years.

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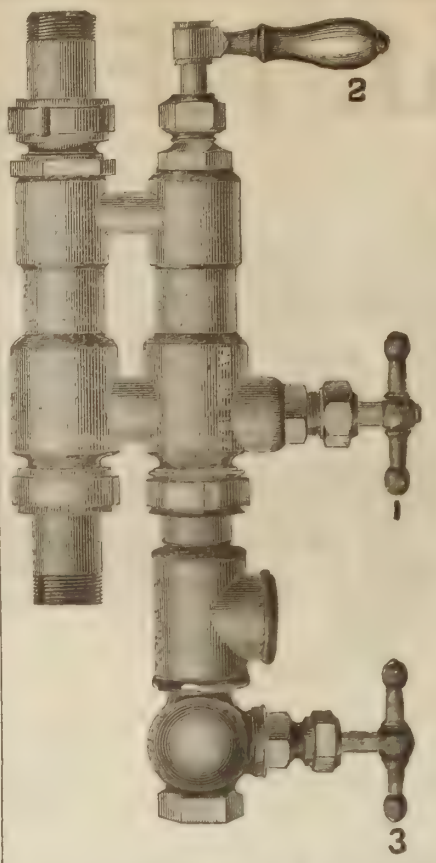

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VOL. 1. PETERBOROUGH, ONT., MARCH 15, 1881. NO. 10.

THE RIVER, STREAM AND CREEK ACT.

Whatever view the reader may take of the bill now before the Ontario Legislature for the purpose of "Protecting the Public Interest in Rivers, Streams and Creeks," everyone will concede that it affects interests of vital importance to those engaged in lumbering operations and deserves the fullest consideration and discussion at their hands. The following are the provisions of the bill as introduced by the Commissioner of Crown Lands,—the Hon. Mr. Pardee :—

1. So far as the Legislature of Ontario has authority so to enact, all persons shall, subject to the provisions in this Act contained, have, and are hereby declared always to have had, during the spring, summer and autumn freshets, the right to, and may float and transmit saw-logs and all other timber of every kind, and all rafts and crafts, down all rivers, creeks and streams in respect of which the Legislature of Ontario has authority to give this power ; and in case it may be necessary to remove any obstruction from such river, creek or stream, or construct any apron, dam, slide, gate-lock, boom, or other work therein or thereon, necessary to facilitate the floating and transmitting such saw-logs and other timber, rafts or crafts, down the same, then it shall be lawful for the person requiring so to float and transmit such saw-logs and other timber, rafts and crafts, and it is hereby declared always to have been lawful, to remove such obstructions, and to construct such apron, dam, slide, gate-lock, boom, or other work necessary for the purposes aforesaid, doing no unnecessary damage to the said river, creek or stream, or to the banks thereof.

2. In case any person shall construct in or upon such river, creek or stream, any apron, dam, slide, gate-lock, boom or other work, necessary to facilitate the floating or transmission of saw-logs or other timber, rafts or crafts, down any such river, creek or stream, which was not navigable or floatable before such improvements were made, or shall blast rocks, or remove shoals or other impediments, or otherwise improve the floatability of such river, creek, or stream, such person shall not have the exclusive right to the use or control of such river, creek or stream, or to such constructions and improvements ; but all persons shall have, during the spring, summer and autumn freshets, the right to float and transmit saw-logs and other timber, rafts and crafts, down all such rivers, creeks or streams, and through and over such constructions and improvements, doing no unnecessary damage to the said constructions and improvements, or to the banks of the said rivers, creeks or streams, subject to the payment to the person who has made such constructions and improvements, of reasonable tolls.

3. The foregoing sections, and all the rights therein given, and all the provisions therein made and contained, shall extend and apply to all rivers, creeks and streams, mentioned in the first section of this Act, and to all constructions and improvements made therein or thereon, whether the bed of such river, creek or stream, or the land through which the same runs, has been granted by the Crown or not, and if granted by the Crown, shall be binding upon such grantees, their executors and assigns.

4. The Lieutenant-Governor in Council may fix the amounts which any person entitled to tolls under this Act shall be at liberty to charge on the saw-logs and different kinds of timber, rafts or crafts, and may from time to time vary the same ; and the Lieutenant-Governor in Council, in fixing such tolls shall have regard to, and take into consideration, the original cost of such constructions and improvements, as well as the amount required to maintain the same, and to cover interest upon the original cost.

5. The foregoing provisions of this Act shall apply to all such constructions and improvements as may hitherto have been made, as well as to such as may be in course of construction, or shall hereafter be constructed.

6. All persons driving saw-logs, or other timber, rafts or crafts, down any such river, creek or stream, shall have the right to go along the banks of any such river, creek or stream, and to assist the passage of the timber over the same by all means usual amongst lumbermen, doing no unnecessry damage to the banks of the said river, creek or stream.

7. If any suit is now pending, the result of which will be changed by the passage of this Act, the court or any judge of such court, having authority over such suit, or over the costs, may order the costs of the suit, or any part thereof, to be paid by the party who would have been required to pay such costs if this Act had not been passed.

Mr. Pardee subsequently moved the House into Committee of the Whole and moved that the following clause be added to the bill :— "That every person owning such improvements may make rules and regulations governing the transmission of logs and timber, but no such regulations shall have any force until approved of by the Lieutenant-Governor in Council, who may cancel such regulations and from time to time approve of new ones."

The motion was carried.

Mr. Pardee, still later, added another new clause, providing that the tolls imposed should be a lien on the lumber, recoverable before a magistrate, who, in default of payment, could order the sale of the lumber to secure the tolls. The period during which the lumber is liable to seizure was limited to one month.

The bill was read a third time and passed.

NOT less than 75,000,000 feet of Canadian lumber was imported in Burlington, Vt., last season—a great gain over 1879.

TIMBER ON ROAD ALLOWANCES.

TORONTO, Feb. 24.—In the Legislative Assembly on the motion of Mr. PARDEE, the House went into committee on the following resolutions :— 1. In case the Council of any township organized as a separate municipality, or the Council of any united townships, have passed or hereafter pass any by-law for preserving or selling the timber or trees on the Government road allowances within such township or united townships, and included in any such license, the corporation of such township or united townships shall be entitled to be paid, out of the Consolidated Revenue Fund of this province, a sum equal to two per centum of the dues received by Her Majesty for or in respect of the timber or saw logs which, during the existence of such a by-law, were cut within the said township or united townships, under the authority of such license ; but no corporation shall be entitled to such percentage of the dues received for timber or saw logs cut during the times or seasons when any timber or trees on any such road allowances were cut or removed, for which cutting or removal such corporation had, before the fifteenth day of February, one thousand eight hundred and seventy-one, obtained a verdict against any such license or nominee. All money to be paid, as aforesaid, to any municipal corporation shall be expended in the improvement of the highways situate within the township or within the senior or junior township in respect of which such moneys were paid. 2. The percentage to which the junior township or townships of such united townships may be entitled shall only be in respect of the dues received upon timber or trees which shall be cut after the thirteenth day of April, 1881.

The resolutions were carried without amendments.

PINE CULTURE ON WASTE LANDS.

Hitherto the abundance of natural timber in this country has made it easy to dispense with timber culture, and for the most part our land owners have taken little interest in such slow growing crops. This state of things, however, is rapidly passing away. The demand for special woods for manufacturing purposes is steadily and rapidly increasing, while the natural supply is diminishing and must ultimately become quite inadequate. Meanwhile there are millions of acres of land suitable for timber culture and for nothing else, except poor pasturage, that our land owners are allowing to lie waste and idle for lack of a little forethought, and too frequently our would-be thrifty farmers will risk their surplus means in wild-cat speculations, promising but never yielding large and speedy returns, when the same money spent in planting timber would convert their worthless swamps and stony places into very valuable properties.

A correspondent tells of a piece of land that was planted with walnut 23 years ago. This land was flooded every spring and summer, and was unfit for ordinary cultivation. The trees are now from 16 to 20 inches through, and have been sold for $27,000. No particulars are given as to the cost of planting the grove or the amount of attention it has had during the years of growth. There can be little doubt, however, that the investment was small in comparison with the return, and the land would otherwise have remained entirely unproductive ; to the contrary, the timber crop was so much clear gain. It is clear that our national resources might be enormously increased by a similar utilization by timber culture of lands which are now unused and unproductive ; and the planters will find their groves a surer investment for the security of their family possessions than any savings bank deposit.—*Scientific American.*

LUMBER ON HAND.

The *Lumberman's Gazette* of the 23rd Feb., estimates the amount of lumber on hand in the Mississippi River and tributaries, the Lake Michigan, and the Eastern Michigan and Lake Erie districts, and at miscellaneous points in the same neighborhood as follows :—

	1881.	*1880.*	*1879.*
Miss. Valley..	873,367,528	704,807,256	585,001,797
Lake Michigan	821,440,673	727,267,181	694,576,721
E Mich, L Erie	698,646,768	548,749,000	518,745,000
Mis'c'l's points	116,500,000	78,500,000	89,500,000
Total..	2,509,954,969	2,059,323,437	1,887,823,518

The *Gazette* thinks these figures are probably accurate enough for purposes of computation, if due allowance is made for what has been sold since the reports were made and for that which is not available for immediate use. So far as its being green or dry, that can only be of consequence at points where rail shipments are to be made, for lumber cut last fall will be considered fit to go on the market as dry by the time navigation is open.

MIDLAND TIMBER SUPPLY.

The following is the estimate of the timber tributary to the Midland Railway for 1881 :—

Smith & Macdougal	150,000
Maxwell	100,000
H. H. Cook	100,000
Burton Bros	200,000
Nagle	150,000
Stennett	25,000
B. C. L. & T. Co	100,000
Coulson	50,000
Irwin & Boyd	250,000
Strickland Bros	130,000
M. Boyd	20,000
Thompson	40,000
	1,375,000

It is estimated that two-thirds of this amount will consist of board timber.

TORONTO is estimated to have consumed 40,000,000 feet of lumber, 15,000,000 of laths and 10,000,000 shingles during 1880.

NOTICE.

The undersigned having transferred the CANADA LUMBERMAN to Messrs. Toker & Co., Peterborough, it will in future be published by them. The facilities possessed by this extensive and old established house, and the high reputation of the publishers, should be a guarantee that the LUMBERMAN will command a prominent position amongst the leading journals of the day. Those who should patronize it are a wealthy and influential class. The field is ample, and as the undersigned made the transfer above referred to with a view of improving the LUMBERMAN, he feels assured that it only requires the combined support of those in whose interest it is published to ensure it that success which was anticipated when he first established it.

All sums due for subscriptions must be paid to TOKER & Co., or their duly authorized agent.

ALEXANDER BEGG.

February 24, 1881.

The Canada Lumberman

DEVOTED TO THE LUMBER AND TIMBER INTERESTS OF THE DOMINION.

PUBLISHED SEMI-MONTHLY BY

TOKER & Co. PETERBOROUGH.

Terms of Subscription:

One copy, one year, in advance	$2 00
One copy, six months, in advance	1 00

Advertising Rates:

Per line, for one year	$0 90
Per line, for six months	50
Per line, for three months	30
Per line, for first insertion	10
Per line, for each subsequent insertion to 3 mo's.	05
Cards not occupying more than 12 lines (1 inch) per annum	8 00
Cards not occupying more than 12 lines (1 inch) for six months	5 00
Cards not occupying more than 6 lines per annum	5 00
Cards not occupying more than 6 lines, for 6 mo's	3 00

Special rates will be made for page, half page and column advertisements.

Advertisements intended for insertion in any particular issue should reach the office of publication at least three clear days before the day of publication, to insure insertion.

All communications, orders and remittances should be addressed and made payable to TOKER & Co., Peterborough, Ont.

Communications intended for insertion in the CANADA LUMBERMAN, must be accompanied by the name of the writer, not necessarily for publication, but as a guarantee of good faith. Communications to insure insertion (if accepted) in the following number, should be in the hands of the publishers a week before the date of the next issue.

Travelling Agent.

MR. A. L. W. BEGG has been appointed agent for the CANADA LUMBERMAN, and is authorized to collect subscriptions and grant receipts therefor and to make contracts for advertisements appearing in its columns.

PETERBOROUGH, Ont. MARCH 15, 1881

INTRODUCTORY.

In undertaking from henceforth the publication of THE CANADA LUMBERMAN, we feel that it is due to our readers to lay before them the principles on which the management of the paper will be conducted, which we trust will be such as to benefit the trade and to secure its support. Peterborough is not without its advantages as the location of the organ of the lumbering interest. The operations for which it is the base are of considerable importance and it is situated centrally between the great sites of lumbering activity of the Ottawa, the Bay of Quinte and Georgian Bay. Thus it will have no sectional preferences or prejudices, but fairly represent the trade at large.

THE CANADA LUMBERMAN will be purely a trade organ, and will be absolutely non-political. It will contain those accurate statistics which are necessary to the trade as a basis for intelligent operations. Not only will the markets, with which the trade have to do, be carefully reported, but the most trustworthy information possible will be obtained from each locality of the production of timber and lumber, and of the stock in hand. In this respect, however, we feel that we need the co-operation of the trade, and no information could be so satisfactory as what might be supplied by a local secretary or some other recognised representative of the trade for his particular section.

We will aim not only at advocating any measure that may be for the advantage of the lumbermen, but at affording a means by which they may express their wants and wishes, or exchange ideas on subjects of interest to them. By this means also we hope that their mutual action may be facilitated. With this view we will gladly receive communications from those interested in this great industry.

We also trust that THE CANADA LUMBERMAN may be a medium through which improvements in machinery, and other matters intimately connected with the production of lumber or timber, may be brought under the notice of the operators, who may thus readily find in our advertising columns information which would be found with difficulty amid the varied announcements of other journals. The value of such a medium will be readily appreciated by the lumbermen, and by all those having dealings with them.

All information of value to the trade at large will be diligently collected, and matters of interest to them will be discussed and advocated.

THE LUMBERMAN will advocate the establishment of a Bureau of "Woods and Forests" in connection with the Provincial Government. It is generally admitted that the interests of the Provincial treasury are identical with those of the limit holders, and there is room for legislation to protect the public revenue, while at the same time guarding the vested rights of the timber licenses. We would call attention to the following statistics of the receipts from forests and Crown Lands in Ontario alone since Confederation:—

Year.	*Woods and Forests.*	*Crown Lands.*
1867 (6 months).	$ 107,648 61	$ 59,090 49
1868	234,209 85	134,983 57
1869	435,630 78	211,163 95
1870	425,901 07	121,036 49
1871	215,973 28	453,403 20
1872	903,952 19	193,168 98
1873	643,637 56	189,665 36
1874	342,943 97	162,154 43
1875	449,354,75	80,014 41
1876	437,998 77	82,254 49
1877	426,556 67	86,750 29
1878	284,816 62	62,452 77
1879	332,014 47	45,670 22
1880	501,442 17	38,867 90
Total	$5,742,080 76	$1,920,676 55
Average receipts	$425,339 30	$142,339 30

It requires no great effort of the imagination to perceive, that with a continuance of the present system, the period is approaching when the sources of the yearly revenue and of the past surpluses of Ontario, derived from the bonuses accruing from timber lands and the Crown dues on logs and timber, will no longer exist, and when the means for the public expenditure of the Province, to this extent, will have to be derived from some other channel. Although it is now late, practical and judicious legislation may postpone this evil day. THE LUMBERMAN will, from time to time, with the aid of the collective information and suggestions of the operators in the lumber trade, suggest how this may be done. Unfortunately, in the past, legislation has brought the settler and the lumberman into antagonism. Without discussing how this has been brought about, it will be a leading object of this paper to uphold that purely timber areas should not be left open to settlement until the tfmber has been exhausted. To determine and locate these timber areas, is a matter that should be dealt with at once by the purposed Bureau of Woods and Forests. It may be asserted that the present Crown Lands Department is a Bureau of Woods and Forests, but a very slight acquaintance with its workings and a retrospect of its management would show the correctness of the ground we are determined to maintain that a department which has to deal both with our timber areas and with the sale and settlement of our Crown Lands has a double responsibility upon its shoulders that cannot be carried out satisfactorily to the public. The process might be, that in the first place all the wild land should come under the supervision of the Bureau of Woods and Forests. Their dictum being obtained as to what portions should be reserved for lumbering operations, those lands excluded by them as not strictly fulfilling the conditions of a timber area, should then be dealt with by the Crown Lands Department and exposed for sale from time to time as might be deemed advisable. Unfortunately in the past succeeding Ontario Administrations have thrown into the market large areas of timber limits purely and simply for the purpose of creating surpluses, which have given them a great deal of trouble to dispose of to the general satisfaction of the different parts of the Province. Had the evil stopped here, however, it would not have been so bad, but as the public are aware, there is a sort of fictitions settlement that invariably follows the track of the lumberman, and will continue to do so if the lands are open for sale. It is generally this fictitious settlement that has originated those large fires which have destroyed, as it is claimed, almost a third part of the pine timber of Ontario. The course we suggest for dealing with this question would reduce this fire risk to a minimum.

The plantation of new forests would also properly come under the jurisdiction of the Bureau of Woods and Forests. These and other important questions as they arise will be dealt with by THE CANADA LUMBERMAN in the interest of this most important industry, and we trust so to advocate their views as to be looked upon as their representative and to secure their support.

WANTED.

The Publishers of the CANADA LUMBERMAN desire to obtain a reliable and well informed correspondent in every lumbering centre in the Dominion of Canada, and to that end would ask those disposed to act as such, to communicate with them at once, stating the facilities they possess for obtaining *reliable*, early and full information as to the lumber trade in their respective districts, and the renumeration which they will expect for their services as such correspondents.

Chicago's Lumber Trade.

In the attempt to give an idea of the extent of the Chicago lumber trade at the present time, figures delude and dissatisfy. It is easy to say that the city handled, in 1852, 148,000,000 feet; in 1872, 1,184,000,000 feet; in 1879, 1,500,000,000 feet—the last figures representing one-third of the entire manufacture of the North-West: but "millions" convey no startling idea to the layman's mind. It may help a little, however, to mention that to bring this lumber into the city would require average arrivals of thirty cargoes per day for two hundred days, each containing a quarter of a million feet; or that if a number of canal boats, each containing one-eighth of a million feet, were loaded with the importation of 1879, and placed in a line in the Erie canal, they would reach, touching end to end, from Albany to Rochester—three hundred miles.—*Harper's Magazine.*

TO OUR READERS.

The publishers of the CANADA LUMBERMAN regret that in the first issue under their management they are compelled to ask the kindly forbearance and consideration of its subscribers and readers for the short comings connected with the present issue. As most of them will easily understand it is no easy matter to increase both the "out put" and "variety" of a "mill's run" on a moment's notice, and yet that is just what the present publishers have been called upon to do, both in the editorial and mechanical departments of their printing mill.

The reader will, no doubt, observe that the publishers turn out the LUMBERMAN in an entirely new dress, which, independent of the change of place of publication, involved considerable extra labor and loss of time in procuring the material therefor, and that instead of filling its columns largely with general reading matter taken second-hand from their other publications, they have filled it throughout with matter pertaining specially to or having a bearing upon the trade in whose interest it is published, even though the selection may not be all that could be desired, and certainly not such as they hope to make it as soon as the various parts of the machinery connected with its publication have been completed, and got into proper working order.

Bearing these things in mind and remembering that it was only on the 25th ult.—one week before the present number should have appeared—that the present publishers came into possession, they trust that the late appearance of this number will not only be held excusable, but that the decision to date it ahead to the 15th and thus omit the one which should have appeared on the 1st of March, in order to give them a fair start, will meet with approval, and that the evidences contained in the present number of the publishers' desire to render the CANADA LUMBERMAN what its name implies, will obtain for them that sympathy and support through which alone they can hope to attain success in their present undertaking.

CANADIAN LOG OPERATIONS.

The *North-western Lumberman* in referring recently to this winter's operations in Canada, under the above caption, concluded with the following paragraph:—

"The Government of the Dominion of Canada not long since issued an Order in Council increasing the taxes upon timber from 10 cents per log, for logs 16 feet and under, and 15 cents for all over that length, to 12½ cents on the shorter, and 20 cents on the longer. Against this the lumbermen have made a most vigorous protest, the new rates being considered outrageously high. The Premier urges the great need of teh Government for a higher revenue, but while holding out no encouragement that a reduction can be hoped for, will lay the matter before the Cabinet."

Our excellent contemporary is astray in the above statement. The Dominion Government imposes no taxes either on timber or logs except for the use of slides and booms, constructed and maintained by the general Government and for culling; in respect of which no increase—nor indeed change of any kind has taken place for some years. Each Province of the Confederation of Canada has control of its own timber, which was so arranged at the time of Confederation. The only timber owned by the Government of the Dominion is in the Province of Manitoba and the North-west territories in charge of the Department of the Interior, and no increase such as that referred to by our Chicago contemporary has taken place and fees or dues imposed on the products of limits for which licenses have been granted them. It is probable that the *North-western Lumberman* has reference to an Order in Council passed in November last by the authorities of the Province of Quebec, increasing the dues on sawlogs in that Province, in opposition to which the lumbermen interested held a meeting at Ottawa in December last, and passed resolutions asking the Local Government to modify the Order.

Mr. DAVID MOORE has sold his limits west of Pembroke to Mr. J. R. Booth for the sum of $133,000.

THE LIVERPOOL BROKERS' ANNUAL CIRCULARS.

The Liverpool brokers are in the habit of making up their yearly returns to January 31st, so that we have only just now received the following annual circulars—many of them very ably compiled—from which we take the following extracts :—

Messrs. Farnworth & Jardine state that the past year commenced with improving prospects, and the trade looked forward to a more active and profitable business ; stocks generally were low, prices moderate, and advices from abroad all indicated a moderate production for the year; buyers were thus encouraged to operate rather freely early in the season, which unfortunately had the effect of unduly forcing the production abroad, especially of deals, and so to some extent nullifying these favorable expectations ; however, there has been an improving trade, and, with a few exception, the results have been fairly satisfactory.

In the aggregate the import has been 53 per cent. in excess of 1879, and 8 per cent. beyond the average of the last seven years. The consumption has also increased, but not in the same ratio as the import, having been only 25 per cent. in excess of 1879 ; but still it does not reach the average of the last seven years by 1 per cent. The stock is much in excess of last year, which was unusually light, but it is also 13 per cent. more than the average of the last seven years, and is somewhat unequally distributed. It may, however, be noted that the stocks at the American shipping ports are unusually small, therefore the imports during the next few months are likely to be on a much reduced scale.

Prospects are fairly promising for a moderate and steady trade, but last year's supplies were too large, and, as we commence the year with full stocks, we must strongly urge upon shippers to use a little more judgment and discretion, and not press on the market every foot of wood they can possibly produce, otherwise all calculations will be upset, and both shipper and receiver must suffer.

Messrs. Duncan, Ewing & Co. state that the year just ended cannot be said to have been an unsatisfactory one, though it has been shorn of much of the brightness it showed in its earlier months, by the excessive imports which were poured into the market during the latter portion of the import season. Prices have given way recently under the continued pressure to sell, and, as the stocks on hand are quite ample to meet the probable wants of the market until the opening of next import season, there is little chance of any improvement taking place. Looking at the state of matter as it exists at present, the fact that speculative building has been carried to an excess in nearly every part of the north-west of England, and the stocks on hand in Liverpool and other adjacent ports are, apparently, more than will suffice for the next six months, it is evident that the utmost caution should be used by exporters in sending supplies of timber, deals, etc., to this part of the country. At the same time, the brighter side must not be lost sight of ; business throughout the country has slowly but steadily increased, and a feeling of confidence in the future improvement of the general trade of the country is making itself felt. So far as regards the timber trade, much of the effects of this revival will be discountad by the heavy stocks now on hand, which are ready to meet any increased consumption as soon as it sets in.

Fifteen Hundred Miles a A Minute.

The cable message to Australia respecting the Hanlan-Trickett match was an ordinary achievment in telegraphy—in fact, it has never been excelled. The total extent of lines—namely, 12,000 miles—was travelled in one hour and twenty minutes. The greater portion of this time was occupied in transmitting the message through India. From Singapore to Sydney, 5,070 miles, the message occupied only thirty-five seconds in transmission. This message was repeated fourteen times, from station to station, between London and Sydney.—*Sydney Mail.*

Messrs. Bronson & Weston have taken out about 100,000 logs on the Schyan and Black Rivers this winter, of fine white pine, cut on the limits bought from the Egan Estate.

DEFERRED NOTES.

BRANTFORD CITY.

When in Brantford recently, we were shown. in the works of the Waterous Engine Company, a portable flour-mill, complete in itself. It only occupied a floor space 12x20 feet and stood 12 feet high. The wheat was first elevated into the smut mill ; thence into the hopper over the stones ; thence through the 20-inch standard mill-stones, conveyor and elevator to a portable bolting chest, from which the flour in different grades is discharged. The mill, which was ready to be shipped, has a capacity of turning from 6 fo 7 bushels of wheat into good flour per hour. These mills being well adapted to the wants of large lumbermen, are being added to saw-mills in New Brunswick, Nova Scotia and Manitoba. Whilst visiting the Waterous Works we noticed a ship-yard carriage, capable of cutting stuff 60 feet long. It was complete and about to be shipped to Messrs. W. & R. Wallace, of Gardner's Creek, New Brunswick, to be run by one of the Waterous Co's 30 H.P. portable direct action saw-mill engines. It has in the front part of the carriage a special arrangement for taking ship-knees, and facing them with the large saw on each side. This is a most important addition to carriages for ship-yards, and one that lumbermen should look into. We were informed that this firm are working on portable saw-mill orders from Chili, S.A., Australia and Germany, as well as on the ordinary orders for the Provinces of the Dominion, from Nova Scotia to British Columbia. They complain of having to suffer loss in the matter of rebate on materials used in the manufacture of engines, etc., exported to foreign countries, as it is found impracticable to separate the particular items from invoices in which the materials used for other work were included at the time of purchase.

TOWN OF BRAMPTON.

This thriving place is making rapid progress. A number of buildings are to be erected this spring. Here we met Mr. McIntosh, manager of the Caledon Quarries. Those quarries have sent out during the winter, by the Credit Valley Railway, about 260 car loads of stone—both red and grey freestone. There will be a large trade done in this splendid stone next summer ; and there should be, when it becomes known that it is free from iron, and works almost as easy as the Ohio sandstone, whilst the latter costs about $1 per foot more than the former, laid down in Toronto. Mr. McIntosh has had about forty men working during the winter, and will have twice the number in the spring, when a switch will be completed from the railway to the quarry bed, and even under the level of the bed, as the quarry is on the side of a mountain of freestone, having beds of all thicknesses up to five feet, which improve in quality as the strata are followed up. Judging from specimens of the stone in the yard of the Ontario Legislative buildings, it is admirably adopted for monument bases. Any quantity of the best limestone for building railway bridges can also be furnished from these quarries.

Salicylic Acid in Foot-and-Mouth Diseases of Cattle.

The Duke of Brunswick has of late successfully combated the ravages of this much dreaded enemy on his estate at Stampen, near Oels, in Prussian Silesia, by treatment with salicylic acid, the well-known antiseptic. Instead of several weeks required to effect a cure with the remedies hitherto employed, truly surprising results have been brought about within a few days by this new treatment. A solution of the acid is prepared by pouring some hot water on about three tablespoonfuls of salicylic acid in an earthen vessel, and adding lukewarm water to make up a gallon. The mouth and feet of the diseased animal should be carefully washed three times a day with the liquid, and the tops of the hoofs well powdered with the dry acid after each ablution. The effect will, moreover, be greatly increased by salicylating the drinking water of the beasts by the addition of two tablespoonfuls of the acid dissolved in hot water. During the above treatment great attention must be paid to the perfect cleanliness of the stables or sheds. The dung must be saturated with salicylic acid solution to prevent further infection, but it is chiefly in the dung that the germs of the disease are to be found.

HEATING ROOMS.

In some new styles of open fire-places recently introduced in France, use is made of a hot-water circulation to warm one or more chambers from waste heat of an open fire in a room below. Seventy percent of the heat of an open fire, whether of wood, coal, or gas, is spent in heating the chimney flue, or is thrown away out of the top of the chimney. Attempts to save this waste heat have been often made, and there are base-burning stoves in this market that heat two rooms, the one below by a stove and the one above by a hot air flue in the chimney. These stoves work well, but are still somewhat wasteful and are generally vicious, because the air heated in the flues is often taken from the room below, instead of from out-of-doors. The Frenoh stoves made on this plan appear to be of much better design, as they have more heating surface. The water circulation stoves consist simply of a cast-iron water-back placed in the chimney above the open fire, and connected with a system of flow and return hot-water pipes in the rooms above. A cheap and unpatented method of economizing the heat of an open fire would be to give the fire a rather large flue, and in this flue, extending downward from the room above and reaching nearly to the fire-place, to hang two pieces of wrought-iron pipe (an inch in diameter), joined at the lower end by a common coupling, or "return bend." One of these pipes must be a few inches longer than the other and must be connected with the flow-pipe of a hot-water system, the shorter pipe connecting with the return pipe. Every housekeeper is aware that a few feet of brass pipe bent around the inside of a cook-stove will supply a family with abundance of hot water, without apparent effect on the fire. The stove cooks as well with the pipe as without it, and the heat in the hot water is a direct saving of heat that would otherwise go up the chimney. In like manner, a length of pipe hung in a chimney will save heat that otherwise would be lost, and by a well-designed water system the heat may be used to warm a room on the second floor. Where strong coal fires are maintained in open grates, a second pipe reaching down from the third story might also be added, and another room might be warmed by the same fire.—*Scribner's Monthly.*

Failure of Another Railway Viaduct.

Following the destruction of the Tay bridge now comes intelligence of the destruction, on Feb. 6, by ice, of a section of the Solway Viaduct, the most important part of the Solway Junction Railway, and until this week, a connecting link between England and Scotland. In former years the thaw has been accompanied by high winds, breaking up the ice and saving viaduct ; but this season no wind has arisen, and the packs have been carried down in unbroken masses, hurling themselves against the piers, carrying everything before them. The accident has been unattended by any loss of life, owing to the vigilence of the railway authorities, who had watchmen stationed, who gave timely warning.

The structure is very similar to the Tay bridge in construction and size. The viaduct is about a mile and a quarter in length, and about 40 ft. in height ; the spans are in groups of seventeen of 30 ft., each group being connected by a span of 5 ft.

Some idea of the force of the floating ice may be formed from the narrative of the fishermen, that for some days the channel was covered with fields of ice acres in extent from 6 ft. to 12 ft. in thickness. The crashing of the ice as it swept along, borne by the current at the rate of twelve knots an hour, was heard two or three miles off, they said, and even half a mile away from the viaduct the noise was audible, although the wind was blowing in the opposite direction.

Erie Canal Tolls.

ALBANY, N. Y., March 8.—The Canal Board to-day adopted a resolution abolishing tolls on western-bound freight, and placing on the free list salt manufactured in the State and under the supervision of State officers, all voting affirmative except Dutcher. On motion of Ward the Albemarle fertilizer was placed on the free list. Last year's toll sheet on the Black River Canal was adopted. Seymour's resolution prohibiting the passage of rafts on the canals after September was reconsidered and amended so as to apply only to the Black River Canal.

NORTH-WEST TIMBER LIMITS

Statement of timber limits granted in the North-west and Keewatin up to 2nd of Feb., 1881, are as follows: Richard Fuller & Co. timber limit on the Lake of the Woods, 38,400 acres ; Macauley, Ginty & Sprague, timber limit in the vicinity of Roseau River, 32,000 acres ; Macaulay & Ginty, 32,000 acres on the Winnipeg River ; W. J. MacAulay, 64,000 acres between the Lake of the Woods and Rainy Lake ; Capt. H. S. Moore, limit of 32.000 acres on the North Saskatchewan ; Stephen H. Fowler, 64,000 acres on Rainy Lake and Seine River ; Dick & Banning, 12,800 acres on Sandy Bar Creek, Lake Winnipeg ; Joseph Whitehead, 61,440 acres on the Whitemouth River, Keewatin ; Hugh Sutherland, Patrick Kelly, Pratt & Smith, Joseph Whitehead and Peter MacArthur, 477,760 acres on Lakes Winnipegosis and Water Hen ; annual licenses to D. W. Cummings, Stratford, 30,720 acres ; Joseph Sherman and John Pratt, Stratford, 51,200 acres ; Donald Gunn, Shoal Lake, 20,480 acres ; Alexander Cameron, Hallsford, N.W.T., 12,800 acres ; R. McIntosh, Rapid City, 40,960 acres ; J. S. Armitage, Hallsford, 20,480 acres ; Edward Roberts, Winnipeg, 28,160 acres ; Albert Hudson & Co., Portage la Prairie, 840 acres ; Wm. Hardie, Winnipeg, 6,400 acres ; R. Z. Rogers, Grafton, Ont., 4,480 acres. Timber limits of 46,400 acres on the Winnipeg River were granted to Wm. Stubbs, Ottawa, of 64,000 acres on the Fairford and Shell Rivers to Messrs. Shields. Haggart, McLaren and Nichol ; 40,960 acres in the Little Saskatchewan to Messrs. Armitage and McCulloch ; 7,200 acres in the Turtle Mountain district to Messrs. Williams and Harrison ; 2,304 acres on the Bird Tail Creek to John McBeth ; 4,080 acres in the Little Saskatchewan to David McFadden, and 13,440 and 4,480 acres respectively in Manitoba to A. Watts and R. Z. Rogers.

A New Insect Pest.

According to the Banger, Me., *Commercial*, the primeval forests of this continent are now attacked by a small but exceedingly destructive insect that insidiously cuts into and kills the monarchs of the woods. It is noticeable that on forest lands where cutting has been prosecuted and the sunlight has been let into the tangled wild woods, the trees are not attacked, and the sun appears to be the natural annihilator of the pests. They, as yet, attack only spruce trees. It is the testimony of Mr. Jack, the Crown Land Agent of the Province of New Brunswick, that the destroyer attacks the forest primeval. It is nature's design that the old trees should be cut down to make room for new generations. The operation of the insect is as follows :—In July or August a gay little beetle settles upon the bark of the noblest trees, and lays a few tiny eggs; after a short time a small worm similar to a maggot hatched, and then the busy work of the destroyer begins. The worm eats his way to the very heart of the tree, until at last it falls a wreck. So insidious is the operation that many trees which are bored through and through, are green at the top and apparently sound, but a blow of the axe or the force of a gale causes them to fall, and their worthlessness is revealed. At present, the trouble from these pests is confined to the timber country watered by the Upper Kennebec, and that in parts of Aroostook and the Provinces. In consequence of the forests of New Brunswick having been attacked, Mr. Alexander Gibson, will cause 50,000,000 feet of spruce to be cut this winter on the Nashwaak, for if left standing longer the worms would render the lumber worthless.

Extensive Enterprise.

A paper manufacturing firm purposes converting twenty thousand acres of timber-land in Somerset County, Pennsylvannia, into paper. A large gang of workmen has been sent to the tract to begin improvements. There will be erected a shanty 50 ft. in length, 12 ft. in width and 8ft. high. The shanty once completed, work will be begun on a large store building thirty dwelling-houses, and an enormous digester for the cooking and steaming of wood in the manufacture of pulp, and a huge building to be used in the manufacture of paper sacks and wrapping paper, All these preparations are preliminary to reducing 20,000 acres of forest to news, book and fine writing papers.

VARIETIES OF THE PINE.

A recent correspondent of the *Timber Trades Journal*, of London, expressed a sentiment of bewilderment which is probably not confined to England, but exists as well among many well-informed people in this country, and asks an explanation of the terms, "white pine," "yellow pine," "red pine," "Norway pine," etc. He truly remarks that white pine and yellow pine seem to be much alike, and but for the different designations given in different localities would not be distinguishable. The *Trades Journal*, as we remember its reply, asserted that the white and yellow were identical as the terms were used in the English trade, and that the red pine of commerce was what was known as Norway in North America. The fact is that the botanical classification of the timber growth of the American continent recognises no less than twenty-nine distinct species of the *Pinus* family, including distinctive white, red, yellow, and pitch pine designations. Of the white pine family, *Pinus strobus*, sometimes known as Weymouth pine, occupies the foremost place as a commercial wood, and is found from Newfoundland west to the Saskatchewan river, including Canada, Michigan, Wisconsin, and Minnesota, extending south, through the New England States, New York, Pennsylvania, and along the Alleghany mountains to Georgia. It is a white, soft-grained wood, easily worked, a favorite in house-building, and forms the principal wood of the lumber traffic and manufacture of the north and north-west, to which localities its production is now mostly confined. It grows from 80 to 150 ft. in height, and attains a size as great as 6 ft. in diameter in individual cases, the majority of that having a commercial value, however, being from 12 to 48 in. in diameter at the stump. This variety is known locally by designations varying in different localities, and includes the cork, bullsap, grove, sap, buckwheat, sugar, and other designations, applied to different stages of growth and development, or characteristics derived from peculiarity of soil.

The white pine, *Pinus flexilis*, of the Rocky mountain range, from Montana to New Mexico, on the high mountain ranges of Nevada and Arizona, on the Inyo mountains and Mount Silliman in California, is of a similar nature to that before described, being soft in wood, white, and of fair quality. It grows, however, only from 50 to 60 ft. in height, as a rule has a trunk from 24 to 48 in. diameter, and is a good tree for lumber. Its quality is intermediate between the eastern pine and the sugar pine proper.

The sugar pine, *Pinus Lambertiana*, is a distinct species from what is frequently spoken of in the north as sugar pine. It is a wood resembling the eastern pine, but is of a coarser grain, heavier, and stronger, grows to a height of from 150 to 300 ft., and its trunk reaches from 10 to 20 ft. in diameter. It is found on the west coast ranges, from the Santa Lucia mountains, along the Sierra Nevadas—especially on the western flank, at an elevation of from 4,000 to 8,000 ft.—and in Oregon, north to the Columbia river.

The above oonstitute the principal varieties of the white pine family, as classified by Professor Sargent, of the United States census commission, although there are several other varieties of an obscure and less valuable character, entering but little, if at all, into commercial uses.

Yellow pine, *Pinus ponderosa*, is a product of the Pacific coast. It is found in California and Oregon, principally on the western slope of the Sierra Nevadas, and is the most valuable of the western pines. Its wood is yellow, hard, heavy, strong, and durable. It is a large tree of a height of from 200 to 300 ft., with a trunk from 12 to 15 ft. in diameter. It is found extensively along the eastern slopes of the Sierra Nevadas, where it attains a lesser height, being from 100 to 200 ft. above the elevation of 5,000 ft., and having a diameter of from 10 to 15 ft.; it is often found in most arid situations. It is also found throughout the Rocky Mountains, from British Columbia to New Mexico and Arizona, where it grows to but from 80 to 100 ft. in height.

In the family of yellow, we have also a variety, *Pinus mitis*, known as yellow pine, short-leaved pine, and spruce pine. It has a wood yellow in color, hard and compact, and quite durable, growing to a height of from 40 to 70 ft., rarely exceeding 24 in. in diameter. It has been seen as far north as Staten Island but in few cases, and is found as far south as Florida and Alabama, on the Ozark Mountains of Missouri, where it is the only pine, and in Arkansas. Its wood is used for similar purposes as the yellow pine of the south, to which it is inferior.

The yellow pine, long-leaved pine, southern pine, Georgia pine, brown pine, hard pine, by which designations is known the one variety of *Pinus Australis*, or *Pinus palustris*, is found from southern Virginia to Florida, and Mississippi, Louisiana, the valley of the Red River of the South and eastern Texas, extending seldom into the interior more than 100 miles from the coast. It is strong, compact, straight in grain, has light sap, is very durable, and is the true pitch pine, although differing from *Pinus rigida*, to which the term pitch has been given. It is from *Pinus Australis* that the bulk of the turpentine, tar, pitch, and resin produced in the United States is derived. Its growth is from 60 to 100 ft. in height, with a trunk of from 24 to 48 in. in diameter, affects a dry, sandy soil, and is found rarely in low swamps. It is the commercial yellow pine of the south, *par excellence*.

The pitch pine, *Pinus rigida*, is found in Maine and Vermont, and extends to the upper districts of Georgia, and is but little found west of the Alleghanies. Its wood is heavy and resinous, and when grown in low ground is soft and largely sapwood. It grows to a height of from 40 to 80 ft., reaching sometimes 30 in. in diameter, and affects a dry, barren, sandy soil, or a deep swamp. It is included in the cheapest grades of lumber.

Norway pine, sometimes called red pine, *Pinus resinosa*, or *Pinus rubra*, is a growth of the north-west, being found in Canada and the New England States, south to the mountains of Pennsylvania and west to Minnesota. Its wood is light-coloured, resinous, hard, heavy and durable in dry situations, used somewhat for ship-building, and in the west for joist and other building timber. It is usually from 60 to 80 ft. in height, although in the forests of Michigan, Wisconsin, Minnesota, and the British Provinces it attains from 100 to 150 ft., with a trunk from 15 to 48 in. It affects a high, sandy soil, and in favourable locations resembles the wood of the spruce, being equally white. As a rule it borders more closely on the yellow pine of the south, and we are at a loss to understand, from the general character of the two, why it should ever be classed among the reds rather than the yellows.

Redwood proper, *Sequoia sempervirens*, is exclusively a California tree, resembling the white pine in grain and texture. Its colour is a decided red; it is light, close-grained, compact, easily split and worked, is susceptible of a fine polish, is very durable, and in California is sawed into boards and shingles, furnishing the cheapest lumber, fencing, posts and ties of the Pacific coast, and being quite accessible to tide water, is likely to be soon exterminated. It reaches a height of 200 to 300 ft., with a straight, cylindrical trunk of 8 to 12 ft. in diameter, free from limbs to a height of 80 or 100 ft. Unlike the *Pinus* group, the stumps and roots throw up great numbers of vigorous suckers, which would indicate a capacity for cultivation. This wood is seldom seen in the east, except in the shape of packing-boxes, in which goods have been brought from the Pacific ooast. California has also a red wood, *Ceanothus spinosus*, found in the coast ranges, but it is a small and insignificant tree, of little or no commercial value.

The varieties of pine which our English cousins come in contact with from this continent are the white pine, *strobus*, in its different subdivisions, some of which are sufficiently rich in color to lead to no surprise that they should sometimes class it as yellow, although in fact we doubt if a true yellow pine stick is ever seen by them except as it comes from the south, and is known as Pensacola, Fernandina, Georgia, etc.

They also receive of the Norway *Pinus resinosa*, which no doubt has been recognised by them as a red pine, through its botanical description rather than classification as *resinosa*, and this description is measurably warranted by the reddish cast of the thin bark of the growing tree, although the wood partakes more of the pitchy character of the yellow pine of the south. From southern ports they obtain what is known in this country as yellow pine, the variety *Australis* or *palustris*, or that of *mitis*, which, while more properly called pitch pine, has by common consent and custom become known as yellow pine, but should not be confounded with the true yellow, or *ponderosa*, of the Pacific coast, the timber of which is free from the resinous character of the *Australis*, or the *mitis*, or yet of the *resinosa*.—*North-western Lumberman.*

SUBSTITUTES FOR LUMBER.

We are in receipt, from Mr. S. W. Hamilton, of Lawrence, Kansas, of a sample of lumber made from straw, manufactured after a process patented by himself, the particulars of which he does not explain. He informs us, however, that he can manufacture lumber like the sample sent, in any desired length, from 12 feet upward, and to 32 inches in width, at a cost competing with the better or finishing grades of pine, although he does not inform us whether this competition will apply equally to sections where lumber is comparatively cheap, as at Chicago, and at Western grain producing points, as at Kansas. We imagine, however, that the expense will vary but little at any point where straw is obtainable in large quantities.

The manufacture is, of course, confined to a grade which will compete with the better class of lumber, as there would be no object in filling the new product with knots, and shakes would scarcely be obtainable even if desired, while sap and decayed wood must be impossibilities. The sample sent to us will hold a nail as well as wood, is equally susceptible to a high painting finish, and can be polished to as high a degree as is at all desirable. Being made waterproof, we can discover no possible reason why it should not be as durable, or even more so, than pine or even oak, while its adaptability is evidently as great for roofing purposes, as for the fine work of a dwelling.

The question of cost appears to us to be the most important element yet to be practically solved. We can see no reason why it is not susceptible of being worked under the plane or other ordinary tools of the carpenter, and when once fitted to its place, we can readily believe that it will be free from shrinkage or swelling. In appearanoe, the sample before us resembles hardwood, being about as dark as oak and more dense in texture, with a specific gravity one-fifth greater than thoroughly seasoned black walnut. For finishing purposes, it will not, as a rule, be necessarily as thick as ordinary lumber, its tensile strength being apparently double that of wood of the same thickness. On the whole, we are favorably impressed with the appearance of the new artificial lumber.—*N. W. Lumberman.*

How to Use Oil Stones.

Instead of oil, which thickens and makes the stones dirty, a mixture of glycerine and alcohol is used by many. The proportions of the mixture vary according to the instrument operated upon. An article with a large surface, a razor, for instance, sharpen best with a limpid liquid, as three parts of glycerine to one of alcohol. For a graving tool, the cutting surface of which is very small, as is also the pressure exercised on the stone in sharpening, it is necessary to employ glycerine almost pure, with but two or three drops of alcohol.

Cement for Leather.

One who has tried everything, says that after an experience of fifteen years he has found nothing to equal the following as a cement for leather belting: Common glue and isinglass, equal parts, soaked for ten hours in just enough water to cover them. Bring gradually to a boiling heat and add pure tannin until the whole becomes ropy or appears like the white of eggs. Buff of the surface to be joined, apply this cement, and clamp firmly.

THE *Northwestern Lumberman* says that the cedar post and telegraph pole business, which languished during 1880 for want of adequate supplies, seems likely to be overcome during the coming season, and that unless trouble is experienced in obtaining transportation, there is ittle probability of cedar being in short supply at the distributing points on the chain of lakes during 1881.

CEDAR PENCIL-MAKING.

From the forests of Florida the timber is received in roughly-squared logs about fifteen feet in length and eighteen inches square. After being opened—that is, sawn into two pieces by an ordinary double-handed saw—in the saw-pit, the timber is allowed to season. This period of probation being passed, the logs enter the wood-cutting room. Here the timber is cut up into the required lengths and thicknesses by circular saws, but as they cannot be relied upon to produce absolutely true surfaces, the "leaves," as they are termed, are passed under a thicknessing or planing machine, which reduces them to a perfectly uniform size. From this room the "leaves" pass to a second wood-cutting room, where, following their progress, we find them again sawn up into slips or scantlings, and which are technically termed "tops" and "bottoms." The latter is the portion into which, after being grooved, the lead is inserted, while the former is the covering that protects it, the one slip being just half the thickness of the other. The operations of cutting the "tops" and "bottoms" and grooving are performed by little machines running at the almost inconceivable speed of 7,000 revolutions per minute. The groove cut corresponds exactly to the size of the stick of lead to be inserted. From this department the cedar slips are passed on to the "filling in" room, where, while one operator inserts the lead, another glues the "tops" on. The "glueing up" operation being performed, the pencils are placed in a frame and tightly screwed into position. When firm and dry they are placed in a clump a gross at a time, and the ends cut off by means of a circular saw, in order to make the pencils one uniform length. The next operation is the rounding of each pencil, and the marvellous ease, precision, and regularity with which this is performed renders it one of the most beautiful in the entire manufacture. The square pencil is inserted in a small machine containing a rounding chuck running at a high rate of speed. Before the eye can seize all the details of the process the pencil has come out at the other end of the machine rounded to a nicety, without flaw or blemish. One such piece of machinery will turn out twenty gross *per diem*.

Walls and Beams.

One precaution that is very seldom taken with high buildings is so supporting the timbers of the floor that, in case they break or fall, they shall not pry the wall over inward, and in case they expand they will not push it over outward. As ordinarily constructed, holes are left in the walls, into which the ends of the joists are set, the holes being about the size of the ends of the joists, so that in case the floor falls the timbers are apt to tumble the walls inward on the contents of the building. The *Paper Trade Journal* suggests two ways of getting around this. One is to set the end of the joist upon a corbel or projection from the face of the wall, so that the joists clears the face of the wall entirely, and in case it falls it exerts no influence upon the wall. The other method has the same object in view, and accomplishes it in a simpler way. The holes made to receive the joists are made about twice as high as the joists, so that in falling the joist has no prying effect upon the wall. These remarks apply to iron as well as wooden beams; but for iron beams there should be observed the additional precaution to leave a greater space between the end of the beam and the wall, so that the inevitable expansion of the beam from fire shall cause no thrust outward, tending to overthrow the walls. It would perhaps be as well if all external walls were held together by anchor bolts with external plates, which, although not very slightly, yet often tend to hold the wall up when otherwise it would topple and fall outwards. Of course, if the beams are properly cased below with some fireproof material or by some heatproof method, their expansion will be very much less than if they are left naked to the action of the heat.

THERE were received in Boston during the year 1880, 351,744,000 feet of lumber in all. Of this quantity about 209,400,000 feet was received by rail, 41,000,000 by sailing vessels from the south, 1,500,000 by southern steamers, about 100,000,000 by water from Maine and the British provinces.

TIMBER SLIDE COMPANIES.

The following Bill has been introduced in the Ontario Legislature by Attorney-General Mowat :—

1. This Act may be cited as "The Timber Slide Companies Act of 1881."

2. In case the Lieutenant-Governor in Council thinks fit, he may confer upon any company which has heretofore been, or shall be hereafter incorporated, under the Ontario Joint Stock Companies Letters Patent Act, for the purpose of acquiring or constructing and maintaining any dam, slide, pier, boom, or other work, necessary to facilitate the transmission of timber down any river or stream in this Province, or for the purpose of blasting rocks or dredging, or removing shoals or other impediments, or of otherwise improving the navigation of any such river or stream for the said purpose, the powers authorized by the Revised Statute respecting Joint Stock Companies, for the construction of works to facilitate the transmission of Timber down Rivers and Streams, being chapter one hundred and fifty three of the Revised Statutes.

3. Every company shall thereupon become subject to all the provisions of the said Revised Statute as amended by this Act, and to the provisions of this Act.

4. The letters patent conferring the powers authorized by this Act shall not be issued to any company until proof has been furnished that one-half of the proposed capital has been subscribed in good faith, and that at least ten per centum thereof (or five per centum of the whole capital) has been paid in to the credit of trustees for the company, and remains at their credit in some one or more of the chartered banks of this Province.

5. The applicants for a charter shall, with their application, transmit to the Provincial Secretary a report to be laid before the Commissioner of Public Works, in case the Provincial Secretary or other officer charged by the Lieutenant-Governor in Council with the duty of reporting thereon shall deem that the other requirements preliminary to the issue of the charter have been duly complied with, and shall also cause a copy of such report to be laid before the municipal council of the county in which such works are proposed to be situated ; or if the works are situate in more than one county, then before the municipal councils of the counties in or on the boundaries of which such works are proposed to be situated ; or if such proposed works are in unsurveyed lands not contained within the bounds of any incorporated county, then before the Commissioner of Public Works alone.

6. The Lieutenant-Governor may, in the Letters Patent, state a rate of dividend, not exceeding fifteen per centum, which the directors shall be at liberty to pay to the shareholders, if the revenues of the Company otherwise justify such payment, and in such case the Commissioner of Public Works, shall, in considering the tolls to be allowed, have regard to such rate, but no such rate shall be so fixed for a longer period than ten years.

7. The existence of any company incorporated under this Act may be limited to such a term of years as is fixed by the Letters Patent.

8. The notice of application in the *Gazette* need not state the objects of the company with the same detail as is required in the report, but shall give such a description thereof as will reasonably inform the public of the works to be undertaken.

9. The report shall contain :—

(1) A detailed description of the works to be undertaken, and an estimate of their cost ;

(2) An estimate from the best available sources of the quantity of different kinds of timber expected to come down the river or stream yearly after the works have been completed ; and

(3) A schedule of the tolls proposed to be collected.

10. Thirty days after the said report has been laid before the municipal council, or councils, as the case may be, the Commissioner of Public Works shall consider the said report, and in case he approves of the proposed work, he shall report such approval to the Lieutenant-Governor who may thereupon direct the issue of a charter.

11. Every such company may make by-laws, and from time to time alter and amend the same, for the purpose of regulating the safe and orderly transmission of timber over or through the works of the company, and the navigation therewith connected.

12. Copies of the proposed by-laws shall be annexed to the reports required to be made by the company by the fifth section of this Act, and such proposed by-laws with such variations as are made therein by the Commissioner of Public Works at any time before the issue of the Letters Patent, shall, upon issue of such Letters Patent, become the by-laws of the company without further action or adoption by the company, and copies of all new by-laws, and of all amended by-laws, with reference to the said subjects, shall be annexed to the annual report required by the twenty-seventh section of the said Revised Statute.

13. No such new by-law, or amended by-law, shall have any force until one month after it has been included in such report ; but if at the end of one month such by-law has not been disallowed as it may be by the Commissioner of Public Works, it shall have full force and be binding upon the oompany, and upon all persons using the works, unless the Commissioner in the meantime shall have under his hand enlarged the time for considering the same.

14. No such by-law shall impose any penalties, or shall contain anything contrary to the true meaning and intention of the said Revised Statute, chapter one hundred and fifty-three, of this Act.

15. No such company shall construct any such works over or upon or otherwise interfere with or injure any private property, or the property of the Crown, without first having obtained the consent of the owner, or occupier thereof, or of the Crown, except as hereinafter provided.

16. No such company shall be formed under the provisions of this Act to improve any river or stream, for the improvement of which any other company has been formed either under this Act, or any other Act of the Legislature, or upon which there is constructed any provincial work, without the consent of such other company or of the Lieutenant-Governor in Council respectively, which consent shall be formally expressed in writing, and shall be filed in the office of the Provincial Secretary

17. In all cases where a shareholder has not paid ten per centum on the share or shares held by him, but some other party pays the same on his behalf, the party so paying may recover the amount as a debt, in any competent court, although not previously authorized to pay the money on behalf of such shareholder.

18. Upon the expiration of the period limited for the existence of the company, if any such period is limited by the Letters Patent, all the dams, slides, piers, booms and other works constructed by the company, for the transmission of timber down any river or stream, or for the improvement of the navigation of such river or stream, shall become the property of Her Majesty for the public uses of the Province, and the said company, or the shareholders thereof shall have no right to receive any compensation therefor.

19. Notwithstanding the expiration of the said period, the said company shall continue to exist for the purpose of taking such proceedings as may be requisite for getting in its assets, winding up and settling its affairs, and distributing amongst its shareholders the capital stock or accumulated sinking fund of the said company, and the said company may, for the purposes aforesaid, sue and be sued as if the period of its corporate existence had not expired ; but after such period the words "in liquidation" shall be added to the name of the company, and shall be a part of such name.

20. No distribution of capital shall be made under the next preceding section until three years after the expiration of the said period limited as aforesaid for the existence of the said company, but this shall not prevent the distribution amongst the shareholders of the annual profits received from investments, and after the said period the fifty-seventh section of the said Joint Stock Companies' Letters Patent Act shall not apply to the company.

21. The fifty-seventh section of the said Revised Statute, chapter one hundred and fifty-three, is hereby amended by inserting after the word "works," in the eleventh line thereof, the following words :—"and running, driving, booming, towing, sorting, and rafting logs and other timber, and providing an equal annual sinking fund, which, invested at six per centum, shall be sufficient to pay back to the shareholders the amount of their paid-up stock at the end of the time limited for the existence of the company," and by substituting "fifteen dollars" for "ten dollars" where these words occur in the thirteenth, seventeenth, and nineteen lines of the said section.

22. The seventy-second section of the said Revised Statute is hereby amended by inserting after the words "undertaken by them" the following words :—"and mentioned in the report required prior to the incorporation of the company ;" and by inserting after the word "situate," in the ninth line thereof, the following words :—"or by the Commissioner of Public Works."

23. The seventy-third section of the said Revised Statute is hereby amended by inserting after the word "damage," in the thirteenth line thereof, the following words :—"incurred after the time limited for the existence of the company has expired, or."

24. The seventy-fifth section of the said Revised Statute is amended by adding at the end thereof the following words :—"and in settling the amount to be paid to the company for such works, the amount of the sinking fund accumulated at the time of such valuation towards the payment of the capital stock shall be deducted therefrom."

25. Where a company heretofore incorporated under the said Revised Statute, chapter one hundred and fifty-three, or under the Consolidated Statute of Canada, chapter sixty-eight, applies for the issue of letters patent under section sixty-five or section sixty-six of the Ontario Joint Stock Companies' Letters Patent Act, the Lieutenant-Governor may, by the letters patent, confer upon the said company any of the powers authorized by this Act, and may by such letters patent limit the term of existence of the said company, and every such company obtaining letters patent as aforesaid, shall be subject to the provisions of the said Revised Statute, chapter one hundred and fifty-three, as amended by this Act, and to the provisions of this Act.

26. The Lieutenant-Governor may by Supplementary Letters Patent extend the term of existence of any company incorporated for a limited period under this Act, for such a number of years, as by order in Council made previous to the expiry of such period he may direct, and the provisions of this Act having regard to the expiration of the term of existence of a company shall thereupon apply to such term as so extended.

27. Sections—and—of this Act, shall not apply to any company heretofore incorporated, unless and until such company becomes re-incorporated under the said sixty-fifth section of the Ontario Joint Stock Companies' Letters Patent Act.

28. The first twenty-six sections, and also sections numbered from twenty-nine to forty inclusive, of the said Revised Statute respecting Joint Stock Companies for the construction of works to facilitate the transmission of timber down rivers and streams, are hereby repealed, except as to companies heretofore incorporated under the said Act.

TAMARACK vs. OAK.

Experience has shown, says an exchange, that in breaking up old steamboats, the softer tamarack wood will cling to the iron fastening with more tenacity than will the harder oak. If we endeavor to separate the two, we find it easier to drift the iron from the oaken frame than the tamarack knees. When a bolt is driven into hard timber, like oak, the elastic compression of the wood is not nearly so great as in more spongy timber, and where the latter endeavoring to assume its normal condition, hugs the iron more closely, the former retains its compression, and it is no extraordinary occurrence that for a time the bolt is comparatively lose in the hole. With oxidization of the iron, however, the bolt becomes cemented in the wood and is firm, the acid juices of the oak often eating away the iron, when it requires no great strain from the wrenching which a ship will get in a seaway to cause the rust shell to give way and the bolt to draw. When a bolt is driven through a tamarack knee into a ship's frame of oak, we expect the bolt to draw first from the oak, and if we desire to use the knee again, would consider ourselves fortunate if we could draw the bolt from it. If we did succeed, we should expect to find the bolt in the knee comparatively sound, while that in the oak was badly corroded. The same principle is seen in the driving of piles, which will hold better in quicksand than in clay, the loose soil accommodating itself to an easy driving, but closing about the stick with a suction which almost wholly prevents its withdrawal.

NEW USE FOR SAWDUST.

The *Lumberman* says : We have been shown a model of a car wheel consisting of an iron rim of seven inches outward diameter by one-half inch thick, fitted with a well-proportioned hub, the space between the hub and rim filled with pine sawdust, pressed in so solidly that we are ready to believe the assertion that resting the iron rim upon bearings, a pressure equal to 23 tons applied to the hub failed to develop any signs of weakness. We hesitate in these days of progress to assert that anything is impossible, and we begin to think that even sawdust possesses elements of value hitherto unsuspected, and that the day may come when the filled grounds adjacent to all sawmills may be seen to have a great value in the mechanical development and utilization of the now useless *debris* placed upon them to get it out of the way. Sawdust car wheels, sawdust brick, sawdust fence posts, railroad ties, and even sawdust window and door frames, wainscoting and mouldings, begin to appear among the possibilities of the immediate future.

MIDLAND LUMBER SUPPLY.

THE following is the stock on hand of lumber and the estimated cut of 1881 in the district served by the Midland Railway :—

Manufacturer.	*Place.*	*Stock on hand.*	*Cut of 1881.*	*Total.*
British Canadian Lumbering & Timber Co.	Midland	6,750,000	21,250,000	28,000,000
Chew Brothers	Midland		5,000,000	5,000,000
Powers	Victoria Harbor.	7,000,000	12,000,000	19,000,000
McDermott	Victoria Harbor		1,000,000	1,000,000
Christie	Sturgeon Bay	750,000	3,000,000	3,750,000
Tanner	Sturgeon Bay		1,000,000	1,000,000
Georgian Bay Lumber Co.	Waubaushene	5,000,000	26,000,000	31,000,000
Small mills at	Fesserton		2,500,000	2,500,000
Small mills at	Coldwater		1,000,000	1,000,000
Small mills at	Alma		1,500,000	1,500,000
Small mills at	Satterthwaite		1,750,000	1,750,000
Small mills at	Uthoff		750,000	750,000
Small mills at	Orillia		4,000,000	4,000,000
Small mills at	Brechin		500,000	500,000
Small mills at	Lindsay		3,000,000	3,000,000
R. C. Smith	Fenelon Falls	1,000,000	10,000,000	11,000,000
Green & Ellis	Fenelon Falls	500,000	3,500,000	4,000,000
M. Boyd	Bobcaygeon	5,000,000	10,000,000	15,000,000
Hilliard	Peterborough	1,000,000	4,000,000	5,000,000
Hazlitt	Peterborough	4,500,000	5,500,000	10,000,000
Sherin	Peterborough		3,000,000	3,000,000
Irwin & Boyd	Peterborough	8,500,000	11,500,000	20,000,000
J. Z. Rogers	Peterborough	300,000	1,500,000	1,800,000
Ross & Co	Lakefield		6,000,000	6,000,000
Bigelow & Trounce	Port Perry	2,600,000	6,000,000	8,600,000
		42,900,000	145,250,000	188,150,000

ALBANY INSPECTION.

This was originally divided into five qualities, viz.: Clear, Fourths, Box or Selects, Common and Culls, Clear, or Three Uppers, was subdivided into three grades: First, Second, and Third.

First Grade.—A First Clear board shall be perfect in all respects, free from wane, knot, rot, shake or check, not less than twelve feet long and eight inches wide, (in any case) unless a very wide and thick piece, when a minimum length of ten feet may be allowed.

Second Grade.—Not less than twelve feet in length, unless very wide and thick with not more than two defects, *i. e.*, two sound knots which could be covered by a York shilling (dime), or sap equal to one inch on one side, or one knot and one sap; not less than ten inches wide, well manufactured, and free from rot, shake or check.

Third Grade.—Not less than twelve feet long, unless very wide and thick, and ten inches wide, free from rot, shake or check, when three defects might be allowed; either three knots which a York shilling would cover, or two saps an inch wide, with one small knot. If very wide, the defects might be allowed slightly to increase, but not so as to injure the general character of the piece. These three grades are included in one and designated Clear or Good.

Fourths.—Not less than twelve feet long and twelve inches wide, with not exceeding four defects at that width, viz.: if free from sap, four sound knots on the heart side, not larger than a dime; if free from knots, two saps which must not exceed two inches on each edge, and must be bright. At the minimum width, one face must be perfect; with increasing width latitude may be allowed to the extent of the sap.

*Select Box.**—Not less than twelve feet in length and eight inches in width in any case. Must, if narrow, have one perfect face, and may have small knots, not exceeding five, in a width of fourteen inches or more. Sap may meet on one end for not more than one-fifth the length, or two saps may be allowed on sap side, but must have at least three inches of heartwood between; sap must be bright; must be free from rot, shakes and checks.

Box or Common.—All sound lumber free from loose knots, shaky hearts, rot, shake and worm holes, which is below the grades before named shall be classed as Box or Common.

Pickings.—A grade of common which in its general character will dress one side clear, or has no great number of small knots, but is suitable for finishing lumber. (A mighty good fine common, but indifferent select.)

Culls.—Will not hold water, shaky, rotten, coarse knots, black and mouldy sap. If very rotten, embracing more than one-eighth of the board, it becomes a scoot, refuse or mill cull. Market culls must be good enough to make hog pens, board fences or roof boards.

Scoots, Refuse or Mill Culls.—Lumber that is not worth removing from the mill, and is fit only to be burned.

*In the early days of the trade, the grade Select was known as Box, while Sound Common was known as Merchantable.

Remarkable Locomotive Explosion.

On the night of the 23rd of January 1881, a freight engine on the Philadelphia and Reading road was sent out from Palo Alto, Pa., to bring in a train of loaded coal cars from a siding. An hour later the engine was found a mile beyond the siding with all the crew—engineer, conductor, and two brakemen—dead and terribly mutilated. The boiler had exploded, tearing the engine to pieces and killing all the men As the explosion occurred in a very lonely place and all the men were killed, no details are known.—*Railway Gazette.*

Wood Freights.

The London *Shipping and Mercantile Gazette*, of February 24th, says: Three Rivers to Liverpool, 65s.; Quebec to London, 62s. 6d.; Shediac or Miramichi to direct United Kingdom or French Atlantic port, 60s.; Saguenay or Mills, River St. Lawrence, to direct port United Kingdom, 57s. 6d.; Richibucto to direct port W. C., 62s. 6d.; Nova Scotia ports to direct W. C. port, 57s. 6d. A sailing ship has been chartered in the Mersey to load timber at Quebec for Limerick at 26s.

LIVERPOOL.

Though our business has continued quiet, there has been a visible increase in the quantity of orders in the market, though they have been more numerous than large. Of course there is nothing doing in the mining districts, where all trade is standing still, and is likely to continue so until the disputes between the miners and the proprietors are settled. This, however, does not appear near at hand, and the whole district is in a more or less disturbed state; and so long as this condition lasts there is little chance of any business being done in this quarter. This will materially affect the Norwegian pitwood trade, and should act as a check upon the exporters, seeing that it is by no means unlikely that the strike will extend far beyond its present boundaries.

Producers of Norwegian goods are apparently ready sellers, especially of flooring, which is being pressed upon the market at lower prices than those current last year, but buyers are somewhat reticent in making purchases, after the experience of last year, when contracts were made early in the season at good prices, and other cargoes were subsequently shipped upon the open market, to find a purchaser at any price. The season of import for New Brunswick deals, etc., is now about over, and prices have dropped until they cannot be expected to go lower, as all the yarded stock of the port has been imported at higher rates than those now current. At the same time producers abroad must be prepared to suffer a still further reduction if they persist, in the face of the large stocks here and in other ports, in getting out large quantities of logs for deal-cutting.

There is little doubt that at the present time the stocks of deals in the shipping ports of New Brunswick and Nova Scotia are moderate, but that fact should have very little weight with shippers when they fully appreciate the fact that the stocks are heavy here, and must be worked down considerably before they can hope to get paying prices again.

Freights will, in all probability, rule low for the opening of the navigation, both for the deal-producing ports and Quebec. For the latter we hear that about 24s. is the prevailing idea, as the rate offering to Liverpool; this will leave little, if any, margin of profit to the shipowner. The common qualities of yellow pine timber, say from good fair average and downwards, are becoming year by year much less valuable than they were formerly, owing to the competition they meet with in pitch pine, as the latter can be obtained, not only of longer lengths and better sizes, even in sawn timber, but, what is now-a-days of greater importance, at a much lower rate than is asked for the Canadian production.

A large proportion of the stock on hand consists of this description, and it appears most difficult to sell. We cannot help thinking that the Canadians are putting far too high a value upon their productions, especially for the medium and lower qualities of pine timber and deals, and in fact of nearly all their timber, when not of really first-class quality.

LIVERPOOL TIMBER SALES,

On the 11th Feb. Messrs. Alfred Dobell & Co. offered a cargo of Norway spars, poles, etc., which realized fair prices, viz.:—

Masts, 6½ in. diameter, 12d. per cubic foot.
Spars, 4 to 6 in. diameter, 1⅝d. to 1½d. per lineal ft.
Poles, 30 ft. long and upwards, 1⅝d. per lineal ft.
" 29 ft. and under, 1d. per lineal ft.

On the same day Messrs Duncan, Ewing & Co., sold a parcel of 724 logs St. John birch timber, as under:—

13½	to 14½ in.,	14½d.	per ft.
14½	" 15 "	14½d.	"
15	" 15½ "	14⅝d.	"
16	" 16½ "	15½d.	"
17½	" 18 "	16½d. to 18d.	per ft.
18	" 18½ "	17½d. " 18½d.	"
19	" 20 "	19d " 23½d.	"
Maple, plain,		15½d.	per ft.
Ash,	"	18½d.	"

The Advantages of Sawdust as a Filtering Material.

On the 27th ult. Mr. Henry Chapman read a paper before the Institution of Mechanical Engineers on the Farquhar Filtering Apparatus, in the course of which he remarked that, in addition to water and sewage, this automatic self-cleansing process may be expected to effect a revolution in all kinds of filtration, and will prove of great benefit to sugar-makers, distillers, brewers, vinegar-makers, and others who require pure, rapid, continuous, and economic filtration. It entirely supersedes and dispenses with the use of cloths or bags, which entail a considerable annual outlay, and which do not produce an average pure filtration. For brewers and distillers it would be specially useful in filtering the refuse, which at present contains a very large amount of good liquid that is practically wasted owing to the inability of any existing system to filter it continuously.

Taking bulk for bulk it has been found that the following great advantages are in favour of sawdust and against sand, &c. :—

1. It is a cheaper commodity.
2. Its cost of conveyance is not a serious item as it is with sand.
3. Much less manual labour is required in washing sawdust, chiefly on account of its lightness and portability,
4. It produces far purer filtration, because the grains of sawdust, when saturated, pack closely together, and the greater the pressure employed the tighter the grains become knit together, which cannot take place with sand.
5. More than three times the volume of liquid is filtered in a given time through sawdust than through the same bulk of fine sand by this process. The reason is that the solid impurities are arrested immediately on the top surface of the sawdust, and are therefore instantly removed by the cutter, so that rapid and continuous filtration ensues; whereas with sand the impurities always penetrate some distance below the top surface, owing to the impossibility of making grains of sand pack close enough together, even under great pressure. In fact, the grains of sawdust tightly overclap each other under pressure being thus equivalent to a number of pressed layers of fine cloths or blotting paper, and the sawdust bed is thus impervious to anything but pure liquid.

The question naturally arises whether sawdust imparts any flavour to the filtered liquid, which with sugar, &c., might be a disadvantage. The answer is that, after the liquid with which the sawdust has been saturated previous to filtration has been expelled, no flavour from the sawdust can be detected in the filtered liquid. The reason is that the liquid with which the sawdust was saturated is thoroughly absorbed into the loose grains of the sawdust like a sponge, and that the whole of this liquid is, under pressure, squeezed out of the grains, carrying with it the greater part of the flavour in the sawdust. The sawdust being then in a compressed state, the filtered liquid is prevented from entering into the interior of the grains, and in its rapid passage between the grains it does not carry with it any flavour therefrom.

In all cases the sawdust must be saturated with some clear liquid prior to making the filter-bed, in order to create capillary attraction equally in all directions, so that the filtered liquid shall flow equally through the whole of the bed.

Repeated tests have been made to ascertain if the liquid to be filtered drives before it the whole of the liquid used in the saturation of the bed prior to filtration. This has always been proved to be the case, by the following test. The amount of water used in saturating the bed has been carefully measured. So soon as this quantity had been extracted, and not till then, did the filtered sewage, or sugar juice, &c., pass out of the machine.

Experiment with Gate Posts.

Fourteen years ago a Mr. Sterling, of Monroe, Michigan, placed two gate posts of white oak in front of his residence. When they were set he bored into the top of each with an inch and a half auger a hole three inches deep, filled it with common salt, tightly plugged it, and coppered the posts. Having occasion recently to change the location of the posts, he found them as sound from top to bottom as the day they were planted.

Exhausting the Pine Forests.

The Chicago Lumbermen's Exchange held its annual meeting in that city on Monday, March 7th. The President's address contains the startling statement that it will take only twenty years to exhaust the great pine forests of the country if the present rate of depletion continues. The receipts of lumber of all kinds at this port last year were 1,564,000,000 feet.

MIDWINTER MALARIA.

The last number of the *Scientific American* contains the following sensible sanitary advice which should be read by all classes:—

From some cause or combination of causes the present winter has been remarkable for a widely extended and marked increase in diphtheria and scarlet fever, which have invaded homes in which the highest attainable skill has been exercised and the most approved appliances have been employed to render them as healthy as possible. In some cases the immediate causes of these disorders are undiscoverable, but in the light of sanitary science the class of agents which either initiate or greatly increase the virulence of these complaints is no longer problematical. Decaying organic matters, more particularly animal excretions, give rise to a subtle blood poison, which, though it yet evades chemical analysis, is now conceded on all hands to be a positive deadly fact. When this poison invades a dwelling, no matter whether from exterior or interior sources, in sufficient quantity, the lives of the inmates are jeopardized as positively as though they were compelled to breathe a mephitic gas. The effect may not be so prompt or fatal, but the danger is a fact no longer disputed by any intelligent physician.

It is, therefore, not sufficient to guard against interior sources of diseases; the peril may be in a neighbor's house or outbuildings, in the emanations of a compost heap or a filthy street or hidden cesspool, which if they find an avenue may enter sleeping apartments, find a *nidus* in clothing, carpets, and drapery, and bring in their train the swift destruction of all that is most cherished.

A case in point has occurred in a neighboring village. Five cases of diphtheria appeared in a household where the utmost care had been taken with the plumbing. The obvious inference was that the causes of the complaint were exterior to the dwelling. It was found that the mouth of the air-box through which exterior air entered to supply the heating furnaces was on a level with the top of a cemented pit on the adjoining premises, in which accumulations of kitchen refuse, animal, vegetable and barn manure were promiscuously stored and allowed to rot for fertilizing purposes. The foul air from this pit was drawn into the house through this one avenue, and the poisoning of its unfortunate inhabitants, four of whom died in quick succession, was the result. It seems that disease may prevade a house with deadly result where the cause is least suspected; it therefore devolves upon every housekeeper, whether resident of the city, village, or on a farm, to be constantly watchful, not only of his own, but also of his neighbor's premises, that none of the obvious causes of disease be permitted.

New Method of Inlaying Wood.

A new method of inlaying wood has been contrived by a furniture manufacturing house, the process of which is as follows:—A veneer of the same wood as that of which the design to be inlaid consists—say sycamore—is glued entirely over the surface of any hard wood, such as American walnut, and allowed to dry thoroughly. The design is then cut out of a zinc plate about one-twentieth of an inch in thickness, and placed upon the veneer. The whole is now subjected to the action of steam, and made to travel between two powerful cast-iron rollers of 8 inches in diameter, by 2 feet long, two above and two below, which may be brought within any distance of each other by screws. The enormous pressure to which the zinc plate is subjected forces it completely into the veneer, and the veneer into the solid wood beneath it, while the zinc curls up out of the matrix it has thus formed, and comes away easily. All that now remains to be done is to plane down the veneer left untouched by the zinc until a thin shaving is taken off the portion forced into the walnut, when, the surface being perfectly smooth, the operation will be completed. It might be supposed that the result of this forcible compression of the two woods would leave a ragged edge, but this is not the case, the joint being so singularly perfect as to be unappreciable to the touch: indeed, the inlaid wood fits more accurately than by the process of fitting, matching, and filling up with glue, as is practised in the ordinary mode of inlaying.

Trade Notes.

Canadian.

THE outlook for building operations in Montreal during the coming summer is unusually bright.

IT is stated that thousands of tons of ore are ready for shipment at Kingston as soon as navigation opens.

On the 2nd inst., twenty-five men left Eganville for up the Bonnechere, to work on Barnet & Mackay's drive, when it commences.

THE new mill about to be put in operation by the Messrs. Gilmour, at Trenton, will give employment to about 200 men, in addition to the large force already employed by them.

THE Augur shipping company of Montreal, which already owns fifteen barges and two steamers, suitable for the Ottawa lumber trade, are negotiating for the purchase of two new barges with a capacity of 250,000 feet each.

Mr. D. R. MacLeod, of Quebec, bought recently the spruce deals to be cut at Montmorenci mills this year for Messrs. Bryant, Powis & Bryant, who recently purchased the pine deals referred to a few days since. Large purchases have also been made by a Quebec firm of spruce deals at Cap St. Ignace and river Ouelle. The prices are not yet known, but are understood to fully sustain recent quotations.—*Industrial World.*

Mr. W. J. Macaulay, formerly of Winnipeg, is erecting a new saw-mill at Keewatin, near that already erected by the Keewatin Lumber Company. It will have a capacity of eight million feet. By making a cut about 275 feet in length from the Lake of the Woods across a ridge to a pond, a head of 17 feet of water is obtained. Mr. Macaulay had 75 men at work in the woods this winter and will take out about four million feet.

THE Windsor *Mail* says:—"We hear that a stock company of about $200,000 capital is talked of in Windsor, for the purpose of manufacturing agricultural implements. As the sale of these goods is large, and always on the increase, we have no doubt of the success of the undertaking. We have heard it stated that at least $150,000 worth of agricultural implements have been sold in nova Scotia in one year, and there is no reason why such a large amount of money should not remain in the province. We look anxiously for further developments."

THE Perth *Expositor* says:—B. Caldwell & Son will cut 100,000 feet of square timber in the township of Canonto, Frontenac county, to be sent down the Madawaska. They did not cut last season. Hilliard & Dickson, of the same locality, will take out about the same amount. B. Caldwell & Son will cut 400,000 feet of square timber, to 150,000 last season. The yield of sawn lumber on the Mississippi will be from twenty to twenty-five million feet, about the same quantity as last season. On the Clyde, in Levant township, county of Lanark, B. Caldwell & Son will cut about 200,000 square feet of timber.

American.

EXPERIENCED lumbermen concede, says the *Lumberman's Gazette*, that this winter's log cut in Wisconsin will not exceed that of last season.

A STEAM mill, 40x128 feet, containing, besides other machinery, a rotary, for long timber, and eight shingle mills, is nearly completed at Van Buren, Me.

Lumber rates from Stevens' Point are as follows: To Missouri river points, $78.20; to East St. Louis, $61.20; to St. Paul and Minneapolis, $36.00; to Milwaukee, $29.00. This is per car load of 24,000 pounds.

The Stillwater (Minn.) *Gazette* says: It is claimed on good authority that the lumber orop for the present year will not be as large in proportion to the number of men employed as was that of last season. The reason is said to be too much dry snow, which makes hauling hard.

FIVE new glass works were started in Ohio last year, and several more will be added this year. The latest official statistics give 19 firms engaged in glass manufacture, with 32 furnaces, having 292 pots, and employing 2,032 men. In the production of window glass there are employed seven furnaces with 66 pots; flint glass, 19 furnaces with 199 pots; green glass, four furnaces with 27 pots.

The Clearfield (Penn.) County *Times* is moved to say: That there will be more timber put into the river, and if possible got to market, this season than for several years, is now disputed. The indications now are that the demand will be up to the supply, at least so far as the product of this region goes. The present outlook has ample time to change, however, during the next 60 days, and lumbermen who fail to get down on the first floods may get caught in a reduction of price caused by a glut in the lumber market.

THE value of Erie canal tonnage last year was $200,000,000. The wheat acreage of the west, which principally made this business, was more than 2,500,000 acres more than in 1879, and a like increase of acreage is expected this year. Although the paid tolls on the canal of $113,000 a year were abolished, the toll receipts have leaped up to nearly $300,000. The cost of keeping up the canal is nearly $900,000, and the revenues last year were $1,200,000, making a surplus of over $300,000. Before the State of New York discriminated in favor of the canals their business had run down 600,000 tons in twelve months; and since that liberalizing of rates the canals do 2,000,000 tons more business, and there has been a consequent lowering of tolls on the railroads. The Erie canal is almost the only corrective agency of high grain freights from the west.—*American Exchange.*

The Bangor (Me.) *Commercial* gives place to the following: Last fall, when lumber was bringing a good price, it was thought that with the coming winter there would be a general rush for the woods, and that every man who could haul a log on the rollway would do so. Others predicted that in consequence of the immense cut, lumber would sell at ruinous prices in the spring, and many of the operators would suffer financially. This may be partially true as regards the Penobscot, but on the Upper St. John it is wide of the mark, for it is estimated that the amount of logs cut on the Aroostook, Tobique and the small streams in their vicinity will not exceed 25,000,000 feet. Then, again, it is a poor way to figure the supply at market next year from the cut in the woods, for the drives may be hung up, as they often have been, and possibly, leave a not over large supply available.

British.

The deliveries at the Surrey Commercial Docks were very heavy last week, consisting of no less than 5,249 standards of sawn wood and 73,800 feet of timber, as against 4,165 standards and 38,200 feet respectively during the corresponding week of last year. The total quantity, however, for the five weeks is still very much below the figures of 1880.

The importation last year into the United Kingdom, without taking into account staves or mahogany, consisted of 310,338,900 cubic ft. of hewn and sawn wood, or nearly 3,725,000,000 super ft. To form an idea of this stupendous quantity, it may be mentioned that there would be a sufficient number of blocks 1 ft. cube, if placed end to end, to stretch a girdle twice round the earth, and leave almost a sufficient number over to extend through the centre of it.

Liverpool seems to have been very much overcharged with imported wood towards the end of last season. Messrs. Coltart & Co. placed the excess at 45 per cent. over the previous year, but Messrs. Farnworth & Co. reckon it to be 53 per cent. in their circular of 31st January, noticed in our last, and state that the stock on hand is greater now by 13 per cent. than the average of the last seven years.

The sum of the whole matter is that the prospects of trade are very good, but the timber market is in that kind of sensitive state which would be likely to render speculative importation a very risky experiment. Things may go down, but there is at present no indication of a rise.

Quotations are being made, it is said, for Quebec yellow pine at £17 10s. for 1st, £11 10s. for 2nd, and £6 for 3rd, per Petersburg standard, free on board. For spruce, St. John and Miramichi shipment, £4 10s. is, we believe, asked; while for Riga goods the figures are put down at £7 for full 11 in. crown, although a little time back £7 5s. was asked, and for 3x9 and 3x10½ to 11 £6 10s. to £6.15s. free on board. —*Timber Trades Journal.*

BRITISH AND AMERICAN TRADE WITH CANADA.

The trade and navigation returns for the Dominion of Canada, which were made up for the past fiscal year and laid on the table of the House of Commons at Ottawa on the 27th of January last, are quite as favorable as our own, and show an increasing trade with the mother country, in comparison of that with other nations, which it is very pleasant to see.

Our friends out there are fond of exciting our apprehensions by threatening to let the United States have all their timber (more than half, they generally tell us, is already set apart for them), if we do not relax our purse-strings and pay better prices than we are accustomed to do for their staple articles of wood traffic, pine and spruce, which have been getting very scarce (on paper) for the past ten years, but in reality pouring into this country faster and at a cheaper rate the last year or two than ever before.

But in point of fact these returns reveal to us by the test of figures that the United States, so far from superseding the British demand by their requirements from Canada, do not by any means keep pace with us. It was easily proved from the Custom House returns of the entries and clearances at Quebec, Montreal, and the Saguenay, that the deliveries by sea to the United States ports bore no sort of comparison to those for the United Kingdom. but there was always the traffic across the river and by the lakes to fill the imagination of buyers on this side of the Atlantic with untold millions of loads making their exit from the Dominion by routes of which the ports of entry on the St. Lawrence took no note. But the trade returns of a country grasp the statistics of the business done at every outlet or inlet of the Dominion, and by those now before us we are enabled to compare the respective values of their American and their British trade, as they really stand, to the people of Canada.

The total value of the exports of the Dominion last year was only twice exceeded since its Confederation, and that was in the wildly speculative years 1873 and 1874, when everybody thought they were on the high road to prosperity because, whatever price goods sold for during the first of those years, the buyer was willing to contract for similar goods at some advance for the year following; such at least was the case with the timber trade, till 1875 came and dispelled the illusion. However, not only has the trade again resumed the activity of its best days, but the exports last year from the Dominion, for the first time in its history, exceeded the value of the imports, which means just this, that in a national point of view it is taking more money than it is spending, and therefore doing its trade at a good profit.

The amount of the excess over the imports was $1,421,711, and over the goods entered for consumption $1,612,910. The total receipts from import and export duties collected at the Custom Houses were $14,138,849, and the aggregate trade of the Dominion shows an increase in business done with the United Kingdom over that of the previous year (1879) $13,018,438, and a decrease in that with the United States of America $8,207,863, than which we require no better evidence of the increasing importance to Canada of its British trade in comparison with that of the United States, the difference being in favor of this country by nearly four and a quarter millions sterling. These statistics are worth recording for future reference as often as we are admonished that the United States are going to buy up all our Canadian timber, as they are earnestly entreated to do in self-defence by those writers who, while preaching an impending timber famine, are not indisposed to do a lively business with what remains of the depleted forests, whose extinction, while they predict, they appear so feelingly to lament. After this, we can look without blinking at the forebodings of the coming year; and there is a paragraph in the circular of Messrs. Guy, Bevan & Co., of St. John, N.B., and Miramichi, which bears immediately on the question. After letting us know that the stock of spruce at St. John is only 27,000,000 ft. super, as compared with 79,000,000 the year before, we have the following warning:—

"The large and increasing demand for these in the United States is likely to prevent several mills, which have lately been cutting for the English market, from doing so any longer."

This would be rather alarming if we had not heard the same kind of report with slight variations before, but we require to be told a little more before attaching much importance to the stock on hand at any depot on the opening of the season. Sweden taught us a serious lesson on this particular point of the trade last year. They proved to us, and Englishmen going over there to see for themselves admitted to a certain extent the evidence of it, that the stocks on hand were much shorter than usual to begin the season with, and to remove any expectation that these small stocks were likely to be replenished during the season they remorselessly dried up their rivers in every direction, as far as it was possible for pens and ink to do it. Nevertheless, we never had such a plentiful supply from that country, which began earlier and lasted longer than usual, but not without water floatage, as appears to have been done last year in Sweden. Our Chicago correspondent add the following:—

"The amount already banked probably approximates pretty closely to 50 per cent. of the entire crop, or at least that part of it which it is customary to put in during the winter. Summer operations have become so common now that they are relied upon by many mill-owners to make up any deficiency in their stock, or to increase it if the development of the season makes it desirable to saw more lumber than they intended."

By this little piece of information the eyes of the importers at home should be pretty considerably opened. The year's supply is not, it seems, governed in any way by the quantity of stock on hand at the opening of the season. That may be large or small as it suits the convenience of shippers to lay it in. Last year during the winter great expectations were entertained by shippers, and they bought up all the stock they could in anticipation of a rise in price at the fountain-head; this year they are not quite so sanguine, after filling up to the brim most of their European channels of demand, and they wisely refrain from encumbering themselves with heavy stocks, as there is no apprehension of any scarcity, or any increase of price. We now can fully comprehend the situation. The stocks abroad at the shipping ports are evidently proportioned to the expected demand. The heavy supply in the interior, like the *poste restante*, must wait till called for. —*Timber Trades Journal.*

Responsibility of Employers.

While a boy of 16 was at work upon a printing press in the press room of a New York paper the press was unexpectedly started. The boy sprang back from his perilous position, and in so doing tipped over the bench he was standing on, causing him to fall against another press, which caught his arm and injured it so as to make it forever useless. He sued the proprietor in the superior court and obtained a verdict for $3,000 damages. The defence was that the accident was caused either by the negligence of the plaintiff or of a fellow workmen, for which the proprietor was not responsible. In charging the jury, Judge Speir said that if the plaintiff or a skilled fellow workman were negligent the plaintiff could not recover damages; but that if the defendant employed persons not skilled in their work and the accident occured through the negligence of one of such persons, the defendant was responsible. An appeal was taken from the judgment on the grounds that Judge Speir erred in thus charging, and in permitting the plaintiff to exhibit his mutilated arm to the view of the jury, thus arousing their sympathy. The general term has affirmed the judgment in a long opinion written by Judge Freedman and concurred in by Chief Justice Sedgwick.

THE Green Bay *Advocate* says there has probably never been so large an amount of products of our northern forests gotten out and shipped in any winter before as this, particularly cedar posts, railroad ties, and telegraph poles, large quantities of which have been put on the track. Much timber killed by fire has been utilized in this way. There has also been a large amount of cordwood and tan bark gotten out.

CARELESS SAWING AND PILING.

In the report of the Agricultural Commission just issued, we find the following with reference to the proper manufacture and piling of hardwood lumber :—

"One of the greatest drawbacks to the hardwood timber business is the difficulty experienced in getting the lumber properly manufactured. While there are many mills distributed throughout the Province, very few of the sawmill men seem to know, or if they do, don't care, how they cut their lumber. In most cases they will cut the logs through and through, thus leaving the heart in the lumber and often one or more inches of bark on one side, besides making the boards of uneven thickness. When they measure such lumber they do so on the wide side, and make no allowance for heart lumber. This is the source of great trouble to the purchasers, as when properly measured there is a great difference, even in a few thousand feet. All hardwood lumber should be cut free from hearts and shakes, and, when cutting, the logs should be turned so as to make the lumber as clear as possible, as a piece of good lumber, either inch or thicker, six or eight inches wide, is worth far more than one twice the width with a heart or shake in the centre or on one edge ; further, it should all be cut uniform in thickness and parallel width, and also square edged. Then, again, a great loss is occasioned by improper piling of the lumber, as often good lumber is completely spoiled and rendered worthless from the way in which it is piled. The piles should be started on firm foundations laid north and south, as lumber piled in these directions prevents the hot summer sun from splitting the ends. Each length and thickness should be piled separately, and, except in long lengths, should only have two cross pieces ; in lumber twelve to fourteen feet long, these should be about nine feet apart. The pile should have a slope of about six inches. This can be done by placing the back stringer six inches lower than the front. This fall causes the rain to run off. The front piling strip should be put across at the very end, or even a little past the end, and each board or plank should come a little forward of the one below it. The piling strips should be over each other, or rather a little in front. For instance, a pile twenty feet high should overhang say two feet, and a straight-edge put up on the front of the pile should touch all the front cross pieces, and not touch the ends of the lnmber. The lumber should not be allowed to remain uncovered, but should, as soon as piled, be covered with culls or cheap lumber. The ends of the covering-boards should extend over the front and rear, and be tied down or have heavy pieces of timber thrown on the top to keep the wind from blowing them away. The piles should be finished as quickly as possible.

If sawmill men would only attend to the above instructions they would get from one to three dollars per thousand feet more for their lumber.

BRITISH TIMBER TRADE, 1880.

An exhaustive review of the trade for 1880 is made by the London *Timber Trades Journal* of January 22nd, from which the following interesting particulars are compiled, attention being directed mainly to American stock sold in the various marts of the kingdom :

The total supply of foreign timber to the United Kingdom, exclusive of staves and furniture woods, for two years past was as follows, with the countries furnishing it, a "load" being 50 cubic feet :

	1879. *Loads.*	*1880.* *Loads.*
Norway and Sweden, hewn	436,653	658,881
Norway and Sweden, sawn	1,406,630	1,608,210
Russia, hewn	174,898	336,649
" sawn	723,609	1,060,608
Germany, hewn	200,911	277,579
British North America, hewn	194,431	360,622
" " sawn	904,589	1,147,040
Other countries, hewn	369,322	486,145
" " sawn	218,584	271,055
Total	4,731,527	6,206,778

The total supply of 1874 was 6,252,641 loads ; 1875, 4,985,769 loads ; in 1876, 6,260,913 loads ; in 1877, 6,665, 361 loads ; in 1878, 5,299,901 loads. Reduced to inch boards the superficial measurement of the supply of 1880 would be about 3,103,389,000 feet.

The importation from Canada to London last year was : Yellow pine deals, 1,805,000 pieces ; spruce deals 2,977,000 pieces ; yellow pine timber 4,357 loads ; red pine 992 loads ; elm 1,991 loads ; ash 2,719 loads ; hickory 311 loads ; ash 3,738 loads ; birch 8,617 loads.

As compared with the importation of 1879, there was a decrease last year of 289,000 pieces of pine deals and 345,000 pieces of spruce deals ; there was an increase in yellow pine timber of 1,603 loads, of oak 1,137, and of birch 5,357 loads.

In 1878 the tonnage employed in bringing cargoes of timber, deals, and other wood goods into Liverpool and Birkenhead was 373,000 tons in 1879, 326,000 tons, and in 1880 about 485,000 tons, or an increase of 28 per cent. over 1878, and 37 per cent. over 1879. Of this 485,000 tons, about 122,000 tons have been vessels engaged in the Quebec and Montreal trade, 102,000 tons from St. John, N.B., 110,000 tons from Nova Scotian ports, 96,000 tons from the Baltic and White Sea, and 55,000 tons from the pitch pine ports, and if we add the tonnage of the vessels bringing teak, greenheart, and mahogany, which have not been taken into account in the above, the total may be set down in round numbers at 500,000 tons.

The imports from Canada of yellow pine timber in 1880 were 47,800 logs, against 25,200 in 1879, and 25,100 in 1878, and from St. John, N.B., and the Lower Gulf ports, 6,100 in 1880, against 3,100 in 1879, and 3,100 in 1878. Of pine deals, 1,660,000 pieces in 1880, against 1,064,000 pieces in 1879, and 1,001,000 pieces in 1878, show a very large increase in this description of goods, which appear to be growing more in favor year by year. The increase in the quantity of deals from New Brunswiok and other ports, chiefly spruce, is shown as follows : In 1860, 6,289,000 pieces, against 4,735,000 pieces in 1879, and 5,896,000 pieces in 1880, which may be estimated as being 87,500 Petersburg standards in 1880, 65,700 in 1879, and 81,800 in 1878.

Canadian goods have not varied much in prices during the past season, save pine deals, which gave way to the extent of 10s. to 15s. per standard during the first part of the import season, owing to the consignment of parcels of low qualities and generally poor specifications, but regular sizes and good qualities have throughout the year been very steady. This has also been the case with prime timber, but fair average and common qualities have been sold at prices under cost of importation.

The import of pitch pine has been, like most other woods, in excess of last year, being about 59,000 logs, against 40,000 logs in 1879. But as there has been throughout a very lively consumption of this favorite timber, our stocks, as will be seen from the table, are moderate. Prices during the year have been high, and, although they have slightly receded here lately, the rates asked abroad are very firm.

	Stock for Dec. 31, 1880, ft.	*Year end'g Dec. 31, 1879. ft.*
Quebec square pine	869,000	534,000
" waney board	303,000	301,000
St. John pine	21,000	23,000
Other ports pine	43,000	18,000
Pitch pine, hewn	394,000	273,000
" sawn	200,000	204,000
" planks	37,000	13,000
Red pine	63,000	22,000
Dantzic, etc., fir	219,000	59,000
Sweden and Norway fir	4,000	7,000
Oak, Canadian	524,000	714,000
" Baltic	37,000	1,500
Elm	43,000	35,000
Ash	13,000	9,000
Birch	275,000	86,000
Greenheart	38,000	117,000
East India teak	77,000	93,500
	Stand'ds.	*Stand'ds.*
Quebec pine and spruce deals	11,095	6,766
B. B. & N. S. spruce deals	30,641	21,592
" pine deals	1,856	2,224
Baltic deals	6,943	3,468
" boards	790	1,002
" flooring boards	2,330	2,091

The total tonnage employed in the conveyance of wood goods to Clyde ports during the year 1880 has amounted to 184,000 tons ; from British North America alone 123,000 tons ; showing 5,000 tons more than the average of the last ten years. From United States (pitch pine), tonnage employed during 1880, 28,400 tons ; India (teak), 13,200 tons ; Mexico (mahogany), 3,200 tons ; Baltic ports and Norway, 5,000 tons, etc. For the conveyance of wood to Grangemouth, through which port this market is supplied with Baltic and Norwegian goods, the tonnage employed during the past year amounted to 99,968 tons. Of this total a small proportion represents imports from Quebec and Pensacola to Grangemouth.

During the year 1877 Quebec square yellow pine was imported to the amount of 77,472 pieces, while the total of 1880 only reaches 36,787 pieces, with a consumption of 43,899 pieces, and in 1879 import 13,231 pieces, and consumption 34,500 pieces. These figures show that much of the consumption of the past two years has been drawn from the unusually heavy import of 1877. The stock now on hand seems to be moderate. Birch timber shows a very heavy import during last year, 9,676 pieces; and the consumption 7,921 pieces. The stock on hand at 31st December last is about equal to that of 1878. The probability of a sparing import for the current year should have a tendency to improve prices.

There has been a marked increase in the import and consumption of pitch pine, a total of 96,694 logs being the import of 1880, and 71,465 logs the amount of consumption, as contrasted with an import of 43,506 logs, and consumption 35,725 logs during 1879. This wood appears to be improving in value and general estimation.

Yellow Pine.—Quebec waney boardwood : the stock at the beginning of the year was much less than usual, and an advance in prices soon took place, which is still well maintained. Recent sales of prime 19 in. average square have been at 2s. 4d.@2s. 7d. per foot.

Deck plank wood.—Prices, 60 to 70 feet average per log at 2s. 3d.@2s. 4½d. per cubic foot ; 90 ft. average at 2s. 6d. per cubic foot. These figures are much the same as were realized at the beginning of the year, and for the spring months a fair demand is anticipated, as shipbuilding promises well.

Building timber.—The import has been judiciously curtailed, and the stock now on hand is comparatively light, which is satisfactory in view of the dull state of the house-building trade ; 50 ft. average recently brought 14d.@16d. per ft., showing an advance on prices current at the beginning of 1880.

Red pine.—Parcels of 30 to 35 ft. average have recently sold at 14d. to 16d., being much the same prices as were obtained in the opening of the year.

Pitch pine.—There has been a very heavy import and large consumption during the year. The stock on hand is not very heavy considering the rate of consumption, and prices at present current are very similar to what they were about a year ago—hewn of 80 to 90 ft. average 20d. to 21d.; and sawn, 35 to 40 ft. average, 18½d. to 19½d.

Elm.—Present prices, 2d. 1d. to 2s. 2d. per cubic ft. for 45 to 66 ft. average, and 1s. 10d. per cubic ft. for 30 ft. average of good quality.

Ash.—Import and consumption during the year show a marked increase, this wood coming more into use by cabinet-makers ; prices 2s. to 2s. 3d. per cubic ft.

Birch.—Current prices Quebec of 16 in. average, 1s. 7d. per cubic ft., lower port, 15 to 16 in. average, at 1s. 4d. per cubic ft. Stock on hand may be called moderate, considering the rate of consumption experienced during the past year.

Deals.—Prices : 1st quality Quebec pine deals, 2s. 2d. to 3s. per cubic ft.; 2nd quality, 1s. 7½d. to 1s. 10d.; 3rd quality, 1s. 2½d. to 1s. 5d. Lower port pine deals, 1st, 2nd and 3rd quality mixed, at 11d. to 1s. 1d. per cubic ft. Spruce deals at 10d. to 1s. 1d. per cubic ft. Last year's total import of deals shows a very large increase over that of 1879. The most marked increase is in lower port deals, of which there were large arrivals in the spring of 1880. There is at present an ample stock of Quebec deals, but of other descriptions the supply is quite moderate.

Prices have undergone very little change during the year.

The reports throughout the entire kingdom show an increased importation for last year and larger stocks on hand at the close, notwithstanding an improvement in trade and a larger consumption.

TIMBER SUPPLY.

There are few questions more important to Western Ontario farmers than the question of timber culture for future use. Forests have been cut down with almost criminal waste and no new ones planted, and even in the Orillia districts ten years will use all lumber fit for the saw. While the futre lumber supply has been much talked of, a few farmers in that neighborhood, show the question not so hard of solution. Having planted a few acres of poor land, they found it does not require many years to grow profitable timber, and that if its culture were properly understood there is little occasion to offer any inducement to plant beyond the self-interest involved in itself, just as there is in any other business pursuit. The man who plants an orchard does not expect to get any return until it is ten or fifteen years old. He knows that if he wants to sell his farm before the trees bear fruit, the statement on the sale-bills that it contains "an orchard of fruit trees just coming into bearing," will help the bidding wonderfully, and it would be the same with the trees if the timber question were properly understood. These parties state that a piece of woodland properly planted will come into use as quickly as an apple orchard will, and a farm of one hundred acres that had a few acres of young forest would bring far more than the additional cost of planting, should the farmer be forced to sell before the timber matured. All this implies that it be properly located. It would neither be prudent nor profitable to plant where a whole acre of timber could be bought for a few dollars any more than it would be wise to plant apple trees the fruit of which nobody would buy. There is, however, no doubt that in fifteen or twenty years, over a large district of our Province, timwill be scarce and lumber high-priced, and that those who plant now will be well rewarded though the trees be not large enough for sawlogs then, yet the little plantation would come well into use for fuel and other purposes. Every one who own a farm should look about him and see how the timber prospect is, and, if he sees a probable scarcity in the market or in his woodshed, plant a few acres to supply the deficiency.

Where the Wood Goes.

To make shoe pegs enough for American use consumes annually 100,000 cords of timber, and to make our lucifer matches 300,000 cubic feet of the best pine are required every year. Lasts and boot-trees take 500,000 cords of birch, beech, and maple, and the handles of tools 500,000 more. The baking of our bricks consumes 2,000,000 cords of wood, or what would cover with forest about 55,000 acres of land. Telegraph poles already up represent 800,000 trees, and their annual repair consumes about 300,000 more. The ties of our railroads consume annually thirty year's growth of 75,000 acres, and to fence all our railroads would cost $45,000,000, with a yearly expenditure of $15,000,000 for repairs. These are some of the ways in which American forests are going. There are others ; packing boxes, for instance, cost in 1874 $12,000,000, while the timber used each year in making waggons and agricultural implements is valued at more than $100,000,000.

THE Thunder Bay *North Star Miner* urges the establishment of rolling mills and blast furnaces at that place. It expresses the opinion that "Thunder Bay is the one point most favorable for the erection of rolling mills and blast furnaces, and capitalists can find no better site, and no better time than the present, for the establishment of industries of this nature. There is here the necessary deposit of ore in quality and quantity, the opportunity of disposing of their manufacture at a large profit, and the matter of labor is also favorable, for it is generally abundant at fair wages."

TWELVE months ago only ten furnaces were in blast in Virginia. There are now 30 stacks for charcoal pig iron, with ten in blast ; eight stacks for coke iron, with eight in blast—24 stacks in blast out of 38 furnaces in the State. There has been an increase of five stacks this year (1880) in Virginia. So far the accumulation of pig iron is merely nominal. Throughout the State and the bordering States of North and South Carolina, Tennessee and West Virginia, the iron industries are prospering, and the promise for 1881 is most satisfactory.

Chips.

OAK is stronger than iron, both pieces being of equal weight.

THOSE who pretend to know predict a busy and therefore prosperous season for the owners of vessels during 1881.

LUMBERMEN in Pennsylvania have been compelled to suspend work on acoount of too much snow in the woods.

The number of boiler explosions in saw, planing and woodworking mills in 1880, was 47, and every explosion killed, on an average, one man and a half.

SINCE national banks were founded in the United States, the Government is the gainer by the single item of the loss in circulation notes of the banks to the extent of at least $3,500,000.

ACCORDING to the *Lumberman's Gazette* St. Louis is making rapid strides as a lumber market, and says that its receipts and sales for 1880 entitles it to rank as the third if not second lumber market in the United States.

THE new mode of manufacturing flour is being introduced into the Guelph, Ontario, mills, and promises quite a revolution in the trade. Iron rollers and middlings purifiers are the order of the day, and a very superior flour is the result.

DURING the last ten years the tonnage of Antwerp has increased 242 per cent. against an increase of 110 per cent. at Hamburg, and 36 per cent. at Liverpool during the same time. This does not look as if protection were killing the trade of Antwerp.

IT is doubtful if the iron foundries and machine shops in Montreal were ever so actively employed as at present. They are all working extra hours, yet unable to fill orders rapidly enough. A great deal of the work is for Manitoba and the North-West.

E. BURNS, of Hamilton, Ont., has been asked by a British company to act as agent for the purchase of timber lands either in Canada or the States. The company is prepared to invest $500,000; it is proposed to manufacture the lumber, and ship it direct to England.

IT is anticipated that the supply of peaches in the Western and Southern markets next season will be very scant. Not many peach buds are likely to escape the frost at some points. At some places even as far south as Arkansas it is feared the trees are killed as well as the buds.

THERE are many kinds of popular possessing qualities in some cases of no inconsiderable value when properly employed. Flooring boards, for instance, very tough and lasting, are made from some of the kinds, and are said to be all but fireproof, naturally, therefore, very unsatisfactory firewood.

THE lumber dealers of Chicago are agitated by the provision of a pending city ordinance requiring keepers of lumber yards to take out special licenses annually. They not only object to paying the fees but to being classed with distillers, brewers, billiard hall keepers and pawnbrokers.

A DEPUTATION of lumbermen from the Upper Ottawa waited on the Hon. Mr. Chapleau to protest against the imposition of the additional taxes which have lately been placed on the lumber by the Quebec Government. Mr. Chapleau promised to lay their grievances before his colleagues.

THE state of Nevada has a remarkable timber, known as mountain mohogany. The trees are not large, averaging less than a foot in diameter. The seasoned timber is said to be as hard as boxwood, of a very fine grain, of a rich red color, very heavy, and a fine material for the wood carver.

QUITE a lumbering business is springing up at Rat Portage, at the head of Lake of the Woods, a number of large saw mills are being constructed there. They are surrounded by considerable forests of pine and more extensive tracts of popular. The Canadian Pacific railroad crosses the Winnipeg river at Rat Portage, and a town of some importance is likely to result.

JAMES SMITH & Co., of Liverpool, in their annual circular say:—The year 1880, just closed, has, with few exceptional circumstances, been the first fairly satisfactory year the wood trade has enjoyed for many years past, and there is a strong opinion, expressed by many experienced buyers, that it is the commencement of several prosperous years.

THE new departure in the mode of bringing square timber down the Ottawa Valley promises to be successful and remunerative. A special train of twenty cars containg square timber from Mackey's station on the Upper Ottawa arrived at Ottawa the other day. The trip is now done in about twelve hours with no loss of timber. It formerly consumed several weeks.

Mr. WATSON, in his *Mechanical News*, says that the best packing he ever used for faced joints, either steam or water, is common drawing paper soaked in oil. After a short time the heat of steam converts it into a substance like parchment, so that it is practically indestructible. It has the advantage of stripping readily from surfaces when it is desired to break a joint.

THE Chicago lumbermen have instituted a system of weekly lunches at the rooms of the exchange, some member furnishing the spread and presiding as host. After disposing of the viands a business meeting is held and matters of interest to the trade are discussed. The attendance at the meetings of the exchange is said to have increased since the new order has prevailed. Lumbermen love to eat, no doubt.

THE Guelph *Herald* says that Mr. James Campbell, of East Williams, drew into Strathroy recently, with one team (one of which was his champion plough horse and the other a horse 24 years old), a stick of square oak which the culler scaled at 216 feet. He handled two other sticks which measured respectively 168 and 140 feet, the three making 516 feet. It was pretty generally supposed that the timber in this region was about exhausted, but these sticks do not point that way.

THE PROSPECT FOR BUSINESS.

If there is not to be a continuation of the business activity throughout the present year, and a large increase therein, the signs are very misleading. The flow of specie to this country continues, and the amount coming on account is not the whole sum, by any means. The stream of immigration is still pouring into this country, and the thrifty Germans coming are bringing with them no small amount of money, one train load which passed over a Michigan railroad the other day being reported as carrying westward more than one hundred thousand dollars. There has not been, at least since 1873, such an amount of railroad building done as is proposed this year, and never such gigantic enterprises on foot. Railroads are projected in every direction, and the money for their construction is at hand. Such grand enterprises as the world never saw since Rome built the Appian way, are under construction. The Canadian Pacific railroad, to cost some $90,000,000, and traversing the wilderness of the north to bind the British possessions in a closer union. The Northern Pacific, which is being pushed with remarkable energy and will be finished in 1882, although it was once considered a "dead duck." The Central and Union Pacific railways are spreading themselves out northward to mineral regions, coal lands and agricultural and grazing districts. The Union will soon have 3,000 miles of roads tributary to it, and the Central is destined to become a part of a line under one management extending entirely across the continent. The Southern Pacific railroad only lacks a few miles of completion, and will unite the Atlantic at Norfolk with the Pacific at San Diego as well as San Francisco. The new south-western system planned by Jay Gould has the ancient city of Mexico as an objective point and will probably be extended to Guayumas on the Pacific. Then there are the several schemes for crossing the isthmus of Central America, one of which will probably break ground this year and go forward until completed. There is no end of lesser railroad enterprises, which at other times would have been great undertakings, but are now mere bagatelle beside those above named. There is money for all, and the dirt will fly in a lively manner on all this year. Business is bound to be good while it lasts. Labor will be in good demand, money will be plenty and more building and repairing will be done, making an additional demand for lumber. This is going to be a good year for the trade, and no mistake.—*Lumberman's Gazette.*

THE QUEBEC TIMBER DUES.

On Tuesday of last week an influential deputation, representing the lumbering interests of the Ottawa District, Quebec and Montreal, waited on the Hon. Mr. Chapleau at his office in this city in reference to the proposed increase in the timber tariff in the Province of Quebec. The deputation was composed of Messrs. Alonzo Wright, M. P., John Rochester, M.P., John Poupore, M.P., Peter White, M.P., Col. Allan Gilmour, J. K. Ward, Mackey and several others. The timber dues heretofore have been levied upon each saw-log according to its dimensions, and the tariff has been for every log 13½ feet long and 16 inches in diameter and under 10 cents, and for every log of 13½ feet in length and 17 inches and over in diameter, 15 cents. To this rate the lumber dealers never objected, but by a recent order in council it appears that the Government propose to increase the tariff very greatly. It is now proposed to levy a tax of 12½ cents upon the smaller class of logs and 26 cents on the larger. This rate the lumbermen consider exorbitant, and ask that the dues be levied in the same manner as in Ontario, viz., that each log be taxed in proportion to its contents, superficial or board measure. In Ontario the tariff is 75 cents upon every thousand feet, and this mode of levying duties is found much more equitable for all concerned. The lumbermen ask for a reduction in the proposed duties, as they consider that to put such a tariff in force as proposed would seriously hamper the whole lumbering business of the Province, and result in a great waste of timber, and calculate that under the proposed tariff instead of 75 cents per thousand as in Ontario the duty in Quebec would amount to about $1.50 per thousand. The Premier informed the deputation that the Province was sadly in need of an increased revenue, and that other sources of revenue being almost exhausted, it had been decided to increase the timber dues, but he would bring the matter before his colleagues in the Government, with the recommendation that the Ontario system of levying dues be adopted. —*Montreal Witness.*

PUGET SOUND TIMBER.

A correspondent of the Chicago *Times* writes as follows concerning the fir tree growths of Puget Sound, W. T. :—He says the trees average 200 feet in height, and asserts that some specimens have been cut down in his presence that were 320 feet in length by 12 feet in diameter at the base, having a straight and well proportioned log length of 90 feet to the first limb, and being 2 feet in diameter within 20 feet of the top. The cedar trees are in like proportion, and are most valuable for wooden wares of all kinds, while the fir trees are the best for spar and ship timber yet found in any country, and there are but few maratime nations in the world that do not use it in their ship building. One-fourth of the wealth of San Francisco was culled from the firs of Puget Sound while the Government slept, and to-day all the principal large mill owners who saw and prepare for the market from 100,000 to 200,000 feet per day to each mill —and there are 30 or more mills—are all residents of San Francisco, where they invest their profits to the perpetual hurt of Puget Sound residents. A cedar and fir forest is, of itself, a great curiosity; so dense are the tree growths in some places that the sunlight of heaven never reaches the earth at their base. One monarch after another will be found grouped together like an immense barricade. When one of these huge firs is felled by the woodsman, the crash, bound and concussion that resounds over the earth remind one of heavy peals of distant thunder, or the explosion, miles away, of some great powder magazine. There is, apparently, no exhaustion of the timber, and 100 years will possibly pass away before the Puget Sound forests will be cleared of their immense resources of various tree growths; hence, that wealth alone far exceeds that of the entire state of New York.

To Fix Pencil Marks.

To fix pencil marks so they will not rub out, take well skimmed milk and dilute with an equal bulk of water. Wash the pencil marks (whether writing or drawing) with this liquid, using a soft flat camel hair brush, and avoiding all rubbing. Place upon a flat board to dry.

A FOREST MONARCH

Mayor Sleeman, of Guelph, having bought the oak timber rights on the property of Mr. Beeley, near Kossuth, county of Waterloo, had brought home the ten feet butt cut off a certain tree to his brewry, where it was much admired by the members of the Local Legislature during their recent visit. Desirous of obtaining a section of what was evidently an uncommon specimen of tree growth, Professor Brown and some students of the Ontario Agricultural College, by kind permission of Mr. Sleeman, went to Kossuth last Saturday. They found an easy slope of free clay loam, having a south-eastern exposure, and covered all over some 200 acres—with rare samples of maple, beach, ash, birch, elm, bass, and oak, in all their glory of height, girth, and plenty; a rare bush for the older townships of Ontario, and well worth $200 per acre.

About the year 1505, one of these oaks appeared above ground—probably from the dropping of an acorn by a previous monarch long deceased, and may now be growing fine wheat in the immediate neighborhood. In 1881 the proceeds of this acorn are being made into beer barrels, and part rescued to adorn a museum.

This tree is the *Quercus Rubrum*, or Red Champion Oak of America, and in the example now felled stood 135 feet from top to toe; girthed 17 feet 9 inches inside the bark, two inches from the ground, the bark being four inches thick ten feet up. The stem was straight and branchless for 66 feet, and gave measureable timber fifty feet above that. Not a flaw, nor rotten hole of any sort disfigured this magnificent specimen. It grew fresh wood all around last year, as much as it did three hundred years ago, and by careful calculation the students made the age 375 years. The contents of the stem proper are 530 cubic feet, and 90 for top timber—in all 620. We do not know what Mayor Sleeman paid for this "stick," but laid down at Liverpool it is worth $450. Weight 15 tons. Made into inch boards it would floor the largest hall in Canada.

It was a flourishing seedling only fifty years after the discovery of the American continent by Columbus; was seven inches in diameter when England's Virgin Queen reigned. It could tell of the time when the Niagara falls were a quarter of a mile further down stream than now, and at the declaration of American Independence would have made a shed to cover four hundred men.

Nevertheless, it may never have sheltered a red man, as being out of the usual paths, though hungry bears must often have been served with acorn dinner.

What a pity somebody won't try to rouse our national pride towards legislating something to conserve even individual specimens of our forest wealth and beauty. Everybody appears to be so well off, and so busy, that a few strokes of the axe wiping out of existence a four century monument calls for no lament, and certainly calls to no action. When will Canada know what a tree is in all its relationships?—*Guelph Mercury.*

Two Thousand Dollars.

The easiest, cheapest and best way to secure the above amount is to apply for membership in the Mutual Benefit Association of Rochester, N.Y. Pay Dr. S. B. Pollard, 56 Bay Street, one dollar for four medical examinations, he will send your application to the head office, if you are accepted as a member they will issue a certificate of membership, which, on payment of eight dollars, entitles you to full benefits as a member, should you die to-morrow, next day, next week, next month, or any time within three months, this Association will pay to your heirs or assigns, the sum of two thousand dollars. At the expiration of the three months all you have to do is to pay your pro rata amount, which is from 20 to 75 cents on the death of some other member, who has done nothing worse than to die during the three months just past. By paying your assessments on deaths, you keep your certificate alive, and at the commencement of the second year you are assessed two dollars per thousand to keep up office expenses, etc., for the next year. No easier, surer or better schemes to carry two thousand dollars has ever been devised than the Mutual Benefit Associates, of Rochester, N.Y.

b-10

Market Reports.

OFFICE OF THE CANADA LUMBERMAN,
March 10th, 1881.

We have been unable to obtain any reliable figures with regard to late transactions (if any) in the Canadian markets, and therefore refrain from giving those that would be necessarily valueless. We trust, however, by our next issue to have such arrangements completed as will enable us to discharge our duty in this respect.

New York Lumber Market.

The report of the Real Estate Record shows that the market is presenting fairly cheerful features. The majority of the trade speak hopefully of the outlook and if all expectations and predictions are realized there is a first-rate business ahead. Accumulations commence to dwindle and break up, and the additions cannot amount to much for a considerable time ahead.

Spruce meets with some demand for both prompt and distant delivery, but there is no excitement or undue anxiety on the part of buyers, and the market fails to receive a decided stimulus. Quotations as named range from $15.00 up to $17.50 for randoms, and thence up to about $20.00 for specials, with extra difficult held higher. Quite a number of cargoes of random are said to be afloat for this market.

White pine remains in a pretty firm position, and holders express much confidence over the outlook. Available stocks have been greatly reduced, additions cannot be made except at much trouble and expense, and the demand, as a whole, is promising. We quote $17@20 per M. for West India shipping boards; $23@24 for South America do.; $15.50@16.50 for box board; $17.00@17.50 for do. wide and sound do.

Yellow pine continues somewhat in sellers' favor, but more particularly on specials. On random, offering of either old accumulation or current arrival, the tone is unsettled, but inclined to a little weakness, especially on boards. We quote random cargoes at about $23.50@25.00 per M.; ordered cargoes, $25@26 do.; green flooring boards, $24@25 do.; and dry do. do $25 @26.50. Cargoes at the South $14@17 per M. for rough, and $19@20 for dressed.

Saginaw Valley.

The *Lumberman's Gazette* of February 20th says :—

The market this week presents no special features to distinguish it from other points where a firm feeling and confidence in the future prevails. There is no especial activity noticeable, but orders and enquiries are being received daily. The sales made are generally satisfactory; in fact, they have to be satisfactory, especially to the seller, or they are not made. When we speak of sales, of course reference is had to lumber to be delivered on the opening of navigation. When this is remembered, the confidence in the future stability of the general market will be more fully realized. Not less than 100,000,000 feet of stock will have been bought before the opening of navigation at prices averaging $7, $14 and $32. It must be admitted that this is a pretty good indication of a stable market. Sales have been made the past week at $7, $14 and $32, $6.50, $13 and $30 and $7.50, $15 and $35 for cargo lots.

The demand for shingles has increased, and the stock on hand has been pretty much exhausted. Clear butts command $1.90 @ $2.10, and XXX $2.90 @ $3.10.

The expectation is that freights will rule higher than last year. These expectations seem justified by the facts that there will be demands made upon the lake marine in excess of the tonnage added since the close of navigation last year. Some contracts have been made for the entire season of 1881, but the terms have not transpired.

The rates of freight by rail from the Saginaw Valley, for 10 tons, to Albany is $60; to Burlington, Vt., $76; to Buffalo, N. Y., $36; and to New York city $66.

The Australian Timber Trade.

In their monthly timber report, dated Melbourne, Dec. 23rd, 1880, Messrs. Gemmell, Tuckett & Co., state as follows :—Since our issue of the 25th ultimo a large amount of business in timber has been carried through, both at auction and privately, and prices on the whole have been well sustained.

AMERICAN LUMBER.—We report sales ex *Willard Mudgett*, *Ladogo*, *B. Webster*, and *Penobscot*, realizing—for Canadian clear, £14; white pine shelving, £8. 12s. 6. to £10. 10s.; white pine, t. and g. ceiling, £9 per m. super. We hear the clear pine ex *J. A. Borland*—49,238 ft.—has been placed privately at full rates We note the arrival of *W. H. Besse*, with 264,083 ft. shelving, 56,246 ft. white pine, t. and g. ceiling, 10,356 ft. Canada pine siding, 495 spruce deals, and 25 m. 4½ ft. sawn laths. Shipments advised are very moderate, and we look for higher rates being obtained for parcels here and to arrive.

CANADIAN TIMBER.—The cargo ex *R. B. Fuller* was sold at auction on the 17th inst., about three days after the vessel was berthed, realizing—for 2 in. and 3 in. clear, £18 to £18 7s. 6. per m. super; 1 in. do., £15 10s. do.; 6×⅞ t. and g. spruce, 8s. per 100 ft. lineal; 6×⅞ t. and g. red pine, 8s. do.; 11×3 spruce deals, 4d. to 3 11-16d. per ft of 9×3; 9×3 do.; 3 7-16d. to 3 5-16d. do.; 8×3 do.; 3 5-16d. do.; 7×3 do.; 2 15-16d. do.; 2 in., 3⅝d. to 2⅞d. do.; 11×1, 10×1, 9×1, 8×1, do.; 3⅝d. to 3¼d. do.; red pine deals and boards, 4½d. do. Ex *P. J. Carleton*, 11×3 spruce, 3⅝d. do., 9×3 do., 4d. do.; 7×3 do., 3 9-16d. do.; 11×1 do., 3⅝d. do. As the *Republic* is now the only vessel to arrive this season from Canada, and will comprise our whole stock in first hands, we expect prices will advance.

COMPARATIVE IMPORTS.

	1880.	1879.	1878.
Spruce deals	56,531	113,053.	60,952

Glasgow.

The imports of foreign timber to Clyde during last week are three cargoes, consisting respectively of mahogany, greenheart, and pitch pine. The mahogany is the cargo per *Ensign* from Belize, the arrival of which, off coast, was announced by the brokers, Messrs. W. Connal & Co., in last issue of the *Journal*. The date of sale is now fixed for the 25th current, at Yorkhill Wharf, Glasgoow.

With regard to the public sales of American timber and deals, reported below, prices are steady; but, owing to the present inclement weather, purchases have been light, various departments of out-door work being hindered from proceeding, and buyers consequently not disposed to stock heavily.

AUCTION SALES.

On 10th inst., at Greenock, Messrs. Allison, Cousland & Hamilton, brokers :—

Quebec waney boardwood, 50 c. ft. av. per log 2s. 1½d. per c. ft.
Do. 33 to 43 c. ft. av. per log 1s. 8d. to 1s. 11½d. per c. ft.
Do. yellow pine, 50 c. ft. av. per log 1s. 6d. per c. ft.
Do. elm, 45 c. ft. av. per log 1s. 10d. per c. ft.
Do. elm, 25 " " 1s. 6d. "
Quebec 1st quality pine deals—
15 ft. 11×3 2s. 10d. "
Do. 12 " 11×3 2s. 8½d. "
Do. 9 " 11×3 2s. 4d. "
Do. 12 " 7/10×3 2s. 6½d. "
Do. 12 " 7/8×3 2s. 1½d. "
Do. 2nd quality pine deals—
12 ft. 10/15×3 1s. 5d. "
Do. 2nd quality pine deal ends—
8 ft. 7/25×3 1s. 7½d. "
Do. 3rd quality pine deals—
12/15 ft. 8/20+3 1s. 2½d. "
Pensacola pitch pine planks—
1 lot 3 in. thick 1s. 0½d. "
Do. 1 " 4/6 " 1s. 2d. "

On 16th inst., at Glasgow, Messrs. Singleton, Dunn & Co., brokers :—

1st quality Quebec yellow pine deals— per c. ft
9 to 13 ft. 12/21×3 2s. 9d. "
1st do. planks 6 " 8 " 7/16×2 1s. 5½d. "
2nd do. deals 9 " 14 " 7/15×3 1s. 5d. "
do. planks 9 " 14 " 7/16×2 1s. 2d. "
3rd do. deals 9 " 16 " 6/9×3 1s. 2d. and 1s. 3d
Quebec red pine deal ends—
6 to 8 ft. 6/11×⅜ 8½d. per c. ft.
1st quality Sault-au-Cochon yellow pine deals—
9 to 15 ft. 11×3 2s. 5½d per c. ft
Do. do. 9 " 13 " 6/10×3 2s. 2½d. "
2nd do. 9 " 14 " 11/25×3 1s. 11½d. "
4th do. 10 " 12 " 12/22×3 1s. 3½d. "
1st and 2nd quality do. planks—
10 to 14 ft. 6/12×2 1s. 2½d. "
2nd quality do. red pine deals—
9 to 19 ft. 6/8×3 10⅜d. "
3rd do. 12 " 19 " 7/8×3 10d. "
" do. 9 " 16 " 6/7×3 9d. "
" do. ends 7 " 8 " 9×3 9½d. "
" do. " 8 " 6/7×3 9d. "
" do. " 5 " 7 " 6/9×3 8½d. "
4th quality deals 10 " 17 " 6/8×3 8d. "
Richibucto spruce deals—
9 to 11 ft. 7×3 10d. "

—*Timber Trades Journal, 19th Feb.*

The circulation of the CANADA LUMBERMAN is over 2,000 copies. Advertisers should note this.

Board of Trade Returns.

An account of the wood imports into the United Kingdom during the month ending January 31st, 1881, compared with the corresponding period of last year :

	Month ended 31st January. Quantity.		Value.	
	1880.	1881.	1880.	1881.
	*Loads.	Loads.	£	£
TIMBER (hewn.)..	1,441	4,931	4,625	16,630
Russia	29,400	27,969	48,895	44,643
Sweden & Norway..	3,891	9,860	11,338	35,196
Germany	1,250	2,009	4,453	9,039
Brit. North America	33,246	28,672	62,302	42,113
Other Countries				
	69,228	73,441	131,613	147,612
Total				
Timber (sawn or split planed or dressed)				
Russia	5,761	14,577	12,179	33,267
Sweden & Norway..	19,298	20,440	45,018	52,587
Brit. North America	14,347	6,502	32,249	19,093
Other Countries	11,400	8,935	36,784	30,425
Total	50,806	50,454	126,230	135,372
Staves (all sizes)	1,407	4,389	8,714	27,774
Mahogany (tons)..	1,763	2,472	14,581	22,136

*A "Load" equals 50 feet.

Chicago.

YARD QUOTATIONS—CAR LOTS—DRY.

FINISHING LUMBER—ROUGH.

1st, 2d clear, 1, 1¼ and 1½ in. $43 00
1st and 2d clear, 2 in 45 00
1st and 2d clear, 3 in. 50 00
3d clear, 1¼, 1½ and 2 in. 38 00
7 and 8 inch clear 32 00
Select 1 in. A 32 00
Select B 22 00
1¼, 2 in. B 26 00
7 and 8 in. B 26 00
Clear and Select 2x4 28 00
2x6 and 2x8 32 00
All one length $1 extra.

WAGGON-BOX STUFF.

3-in and up. A $43 00
4-in. and up. B 37 00
14-in. and up. C 26 00
D 17 00
All 14 feet $2 extra.

STOCK BOARDS.

12 in. A, 12 to 16 ft. $37 00
12 in. B 33 00
12 in. C 28 00
12 in. D, 12, 14 and 16 ft. 17 00
12 in. D, 18 ft. 19 00
12 in., 20 ft. 20 00
10 in. A 35 00
10 in. B 30 00
10 in. C 24 00

COMMON BOARDS—ROUGH.

	Dry.
Common boards, 12 in.	$15 00
10 and 20 ft.	14 00
12, 14, 16 and 18 ft.	13 50
Culls, all lengths	11 50
1¼ and 1½ com	13 50

TIMBER AND DIMENSION—DRY.

Small timber, 18 ft. and under $11 50
12, 14, 16 and 18 ft. joist 12 50
2x4, 10 and 20 ft 13 50
2x4, 18 ft $11 00@12 00
20 feet 13 00
22 feet 16 00
24 feet 17 00
26 feet 20 00
28 feet 20 00
30 feet 20 00
2 in. cull plank, all widths 9 00
2x4 culls, all lengths
2x6 culls, all lengths

SHINGLES—16-INCH—DRY—CAR LOTS.

Clear $3 25
Extra A 2 90
Standard A 2 65
Cedar shingles $2 00@2 50

Ends of cars and less than car load lots, five cents per thousand extra. The shingles handled in the Chicago market are all 16-inch.

PICKETS—LATH.

Flat, select and clear, d. and h $21 00
Square, d. and p 21 00
Flat, rough, good 15 00
Flat, rough, common 11 00
Dry lath 2 25

CEDAR POSTS AND POLES.

Sawed ½ of 6½ in., 7 ft. $19 00
½ 6 " 7 ft. 10 50
½ 7 " 7 ft. 12 00
½ 8 " 7 ft. 16 50
¼ 8 " 7 ft. 9 00
¼ 9, 10, 11 and 12 in., 7 ft. long 12 00
4 in., round, full length 12 00
5 " " " 16 00
6 " " " 20 00
7 " " " 22 00
8 " " " 30 00
10 feet, per inch 6 00
12 " " 9 00
14 " " 10 00
16 " " $11 00@13 50
20 " " 16 00

Buffalo.

We quote cargo lots :

Uppers $35 00@40 00
Common 16 00@19 00
Culls 11 00@12 00

Assorted lumber in car lots or boat loads :

3 uppers 1 inch $ @40 00
Do. 1¼ and 1½ inch 40 00@42 00
Do. 2 inch 45 00@47 00
Do. 2½, 3 and 4 inch, special.
Pickings, 1 inch 28 00@30 00
" 1¼ and 1½ inch 33 00@35 00
" 2, 3 and 4 inch, special.
Shelving 22 00@24 00
Cutting up 22 00@24 00
Sidings, common, 1 inch 16 50@17 00
" 1¼ inch and over 17 00@20 00
Common, stocks 16 50@17 00
Box, all thicknesses 13 00@14 00
18 inch, XXX shingles 3 00@3 70
18 inch, clear butts 2 60@2 70
Lath 1 75@1 80

Tonawanda.

CARGO LOTS—MICHIGAN INSPECTION.

Three uppers $38 00@40 00
Common 17 50@19 50
Culls 12 00@15 00

Oswego Railway Freights.

The Oswego *Daily Times* quotes railway freights on lumber from that point as follows :

To Albany $2 50 per ton
" New York 3 00 "
" Boston 3 50 "
" Philadelphia 4 00 "

Advertisements.

For Sale.

LOT 36, in the eleventh Concession of Anstruther. d58-1m GEORGE STETHEM.

Wanted.

A SECOND HAND DOUBLE EDGER; also a LATH MACHINE, both in good repair. Reply stating lowest cash terms or particulars to Box 1002, Peterborough. b10

For Sale.

A 40 INCH LEFFELL WHEEL and COMPLETE CIRCULAR RIG, all in good order, suitable for a fifteen foot head. Apply to Box 1002, Peterborough. b10

Reid & Co.,

WHOLESALE LUMBER DEALERS. Lumber, lath, shingles, &c. Car lots to suit customers. Best Culls in the market at from $6 to $7 per M.
OFFICE ON DOCK.—Esplande, foot of Shelbourne Street, Toronto b15

Hardwood Timber Land

FOR SALE.

FOR SALE, 1200 ACRES HARDWOOD TIMBER LAND near Nipissing Railway, Coboconk. Easy terms. OSHAWA CABINET CO., Oshawa. b13

Timber Limits for Sale.

SEVERAL MOST VALUABLE TIMBER LIMITS on North Shore of Lake Huron.
For particulars apply to THOS. SHORTISS, Imperial Bank Building, Toronto. b12

Situation Wanted.

A Book-keeper of first-class experience desires a situation with a lumber firm. An opportunity of acquiring knowledge of the lumber trade more of an object than the amount of salary. Unexceptional references both as to character and ability.
b15 Apply to the Editor of THE CANADA LUMBERMAN

The Stewart House,

Headquarters of Lumbermen in Peterborough, corner of Hunter and Water Streets. Good accommodation. Terms, $1 per day. Free 'bus at trains.
b15 T. CAVANAGH, Proprietor.

Allandale Junction Hotel

Travellers by Northern Railway have 15 to 20 minutes by all trains, for refreshments. Solid meals. Tea and coffee at counter. Fine brands of Liquors and choice Cigars. b17 E. S. MEEKING, Proprietor.

Orillia House,

ORILLIA.

New and Commodious Brick Building; best north of Toronto; splendid sample rooms; centrally located; free 'bus. b20 JOHN KELLY, Proprietor.

The Queen's Hotel,

TORONTO, CANADA.

McGAW & WINNETT, Proprietors. Patronized by Royalty and the best families. Prices graduated according to room. b20

St. Lawrence Hall,

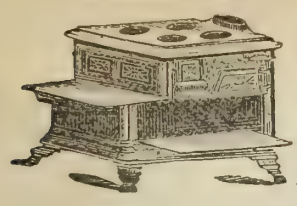
PORT HOPE.

Is noted for its superior home-like comforts—a well kept table, equalling the best hotels in Toronto, and large, well-furnished rooms. Good sample rooms on ground flour. Walton Street, Port Hope.
b26 WM. MACKIE, Proprietor.

St. Louis Hotel.

THE RUSSELL HOTEL CO., Proprietors.
WILLIS RUSSELL, Pres., Quebec.

This hotel, which is unrivalled for size, style and locality in Quebec, is open throughout the year for pleasure and business travel. b18



OTTON & BRO.

HEADQUARTERS FOR

LUMBERMEN'S SUPPLIES

SHANTY STOVES,

Shingle Bands, Tinware & Household Furnishings

In Large or Small Quantities, at Wholesale Rates. 6L10

OTTON & BRO., Dunlop St., BARRIE, ONT.

Queen's Hotel,

BRACEBRIDGE.

JOHN HIGGINS, Proprietor. The proprietor (late of Georgetown,) having lately purchased the above hotel,) will endeavor to make it one of the best houses in the District of Muskoka. Tourists and hunting parties will receive every possible attention. Free 'bus to and from steamboat wharf. Terms, $1 per day. b20

Hotel Ottawa,

No. 21 North Side King Square,

ST. JOHN, N. B.

E. COSMAN, PROPRIETOR.

b **Terms $1.00 to $1.50 per day.** 13

Fraser's Hotel,

GRAVENHURST, ONT.

HENRY FRASER, proprietor, (successor to Dougland Brown.) Mr. Fraser having purchased and thoroughly renovated and refitted that old established hotel, so long and popularly kept and owned by Dougland Brown, in the Village of Gravenhurst, is now in a position to attend to the wants of the travelling and general public. Parties *en route* to the Muskoka District, will find "Fraser's" a comfortable stopping place. The Bar and Larder are well furnished. Convenient Sample Rooms for Commercial Men. Good stabling and attentive hostler. Free 'bus to and from trains and steamboats. b26

NOTICE is hereby given that the time for receiving tenders for the supply of 100,000 gallons of Petroleum Oil, and also for Steam Vessel for Lighthouse Service, has been extended from the 5th MARCH to the 5th APRIL, next.

Full particulars as to quality of the Oil and the description of Vessel required can be obtained on application to the undersigned.

WM. SMITH,
Deputy of the Minister of Marine & Fisheries.

Department of Marine and Fisheries,
Ottawa, 21st February, 1881. 1L10

SEALED TENDERS, marked "For Mounted Police Provisions, Forage and Light supplies," and addressed to the Right Hon. the Minister of the Interior, Ottawa, will be received up to noon on Saturday, 5th March.

Printed forms of Tender containing full information as to the articles and quantities required, may be had on application at the Department.

No Tender will be received unless made on such printed forms.

No payment will be made to Newspapers inserting this advertisement without authority having been first obtained.

J. S. DENNIS,
Deputy Minister of the Interior.

FRED WHITE,
Comptroller.

Ottawa, January 28, 1881. b10

NOTICE.

SEALED TENDERS addressed to the Superintendent General of Indian Affairs, and endorsed "Tender for Indian Supplies," will be received at this office up to noon of Saturday, 26th February, 1881, for the delivery of the usual Indian Supplies, duty paid, at different points in Manitoba and the North-West Territories for the year 1881-82—consisting of Flour, Bacon, Groceries, Ammunition, Twine, Oxen, Cows, Bulls, Agricultural Implements, Tools, Harness, &c.

Forms of Tenders and full particulars relative to the supplies required, can be had by applying to the undersigned or to the Indian Superintendent, Winnipeg.

The lowest or any tender not necessarily accepted.

[No Newspaper to insert without special authority from the Department through the Queen's Printer.]

L. VANKOUGHNET,
Deputy of the Superintendent General of Indian Affairs.

Department of the Indian Affairs,
Ottawa, 17th Jan., 1881.

The time for receiving tenders for Indian Supplies is hereby extended to noon on Saturday, the 5th of March, 1881.

L. VANKOUGHNET,
Deputy of the Superintendent General of Indian Affairs.

Department of Indian Affairs,
Ottawa, 14th February, 1881. b10

White Oak and Ash

LUMBER WANTED.

ADDRESS

YATES AND STRATFORD,

b **BRANTFORD.** 15

JAMES HADDEN,

MANUFACTURER OF

Shingles and Dressed Stuff.

Foxmead, P. O., County of Simcoe, Ont.

Two Planers for sale or exchange for a Boiler. b26

IRWIN & BOYD

Commission Lumber Dealers,

FORWARDERS,

Shipping and General Agents

PORT HOPE.

THE RUSSELL HOUSE,

OTTAWA.

JAS. A. GOUIN, - - PROPRIETOR,

Is the Favourite Resort of Leading Public men of the Dominion attending the annual Session of Parliament.

Ministers of the Crown, Senators, Members of Parliament, Public Officials, as well as those having business with the various Departments of the Government. It is also the headquarters of those having dealings with the princely Lumber Manufacturers in the Great Pine Valley, of which Ottawa is the acknowledged centre.

THE RUSSEL HOUSE being central, almost abutting on the magnificant PARLIAMENT and DEPARTMENTAL BUILDING—the pride of the Country—is thus conveniently situated for those visiting the City on public business. But the location is also everything that could be desired alike for the man of business and the man of pleasure. A few minutes walk brings the guest of the Hotel within reach, not only of all the principal business resorts, but also of the most splendid Mountain and Valley Scenery that can be seen anywhere, as also of the two almost unrivalled Waterfalls—the Chaudiere and Rideau—and of the extensive Manufacturing Establishments and Depots of the leading Lumberman. But, besides the beautiful scenery, which, it may be mentioned, includes the magnificant Ottawa and two of its grand tributaries—the Rideau and Gatineau—there are in the immediate neighborhood, beautiful Lakes and apparently never-ending woods, which afford opportunities for the finest Fishing and Shooting that can be obtained on the Continent.

THE RUSSELL HOUSE affords excellent accommodation for 300 guests; its table is abundantly supplied with Viands of the choicest description, in season, and nothing is left undone to make every visitor feel comfortably "at home."

☞ **Omnibusses meet the Arrival of every Train and Boat.** b26

American Hotel, Corner Young & Front Sts.,

TORONTO, ONT.

Newly and elegantly furnished throughout. Contains one hundred rooms, and under it the new management is first-class in all its appointments, at moderate rates.
Free omnibuses to and from all trains.
O. T. ATWOOD, of New York, and W. R. BINGHAM, of Bradford, Ont., Proprietors. b20

MACHINERY OILS!

TO DEALERS & CONSUMERS.

STOCK OLEVINE,
Equals Castor Oil, and
Warranted not to Gum,

STOCK OLEVINE,
Equals Castor Oil, and
Warranted not to Gum.

It will give the subscriber much pleasure to forward, post free, to any address, on application, a pamphlet, containing instruction and information that have been found of the greatest practical use to dealers and consumers of machinery oil in Canada. It contains the fullest information as to the different kinds of oils, their qualities and uses, thus enabling the consumer to make choice of the very oil best adapted to his wants, and also enables the merchant to select the kinds most likely to be in demand in his neighborhood. The pamphlet shows conclusively that oils properly manufactured from petroleum, are vastly superior to any *animal* or *vegetable* oil. I am now making the same qualities of "Extra" and "XX" oils I manufactured from 1870 to 1873. They are *guaranteed not to thicken with extreme cold*, and warranted to give satisfaction in every particular. Beware of Agents soliciting your orders without my trade-marked order-book.

b12 Address GEO. B. STOCK, P. O. Box 1146, Toronto.

NATIONAL MANUFACTURING COMP'Y

202 SPARKS STREET, OTTAWA.

Manufacturers of Tents for Lumbermen, Sportsmen, Camp Meetings, Photographers, Lawn and Military Encampments, with or without extra roofs, all sizes and styles, white or fancy striped, mildew proof or plain. Prices from $5, upwards. Flags of all descriptions, (regulation sizes) made of the best of silk-finish bunting. CAMP BEDS (Bradley's Patent) the best bed ever invented; size when folded 2 x 6 in.; 3 feet long, weighing only 11 pounds, but strong enough to bear the weight of any man. Waterproof wagon and horse-covers, tarpaulins sheets, coats and leggings of every description made to order on the premises. ☞ Special rates to Lumbermen. Send for catalogue and price list to

NATIONAL MANUFACTURING CO.,
202 Sparks Street, Ottawa

b27

M. BRENNEN,

MANUFACTURER AND WHOLESALE DEALER IN

Lumber, Lath and Shingles,

63, 65 and 67 King William Street,

HAMILTON, ONT

MILLS AND TIMBER LIMITS AT SILVER CREEK, TIAGO P. O., ONT.

Bill Stuff cut from 10 to 60 feet. Cedar Posts on hand.

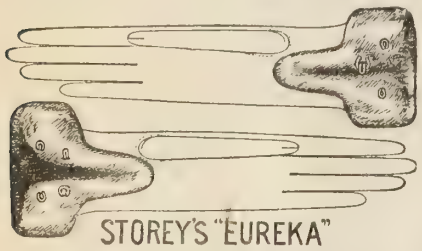
Orders sent to M. BRENNEN, Tiago, P. O., will receive prompt attention b15

W. H. STOREY & SON.,

ACTON, ONTARIO,

GLOVE MANUFACTURERS.

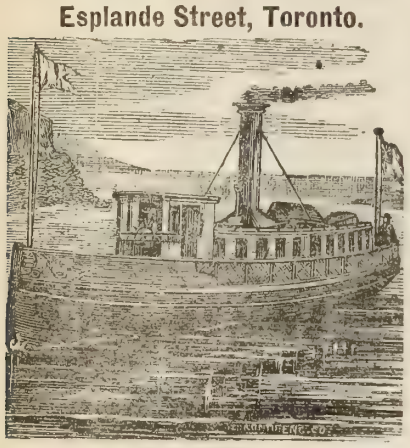
The best description of GLOVES and MITTS in every variety of material and style manufactured by us. b15



STOREY'S "EUREKA" SPRING GLOVE FASTENER, PAT'D

JOHN DOTY

Esplande Street, Toronto.



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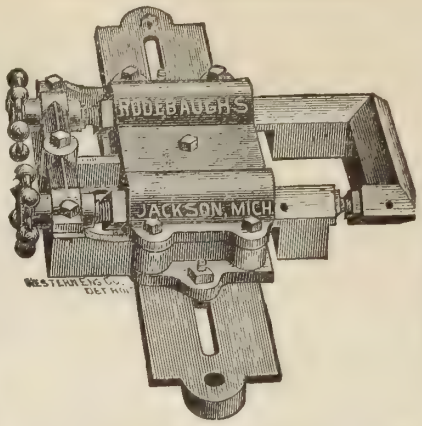

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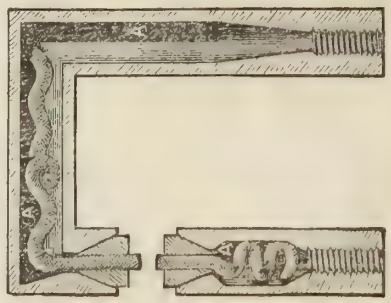

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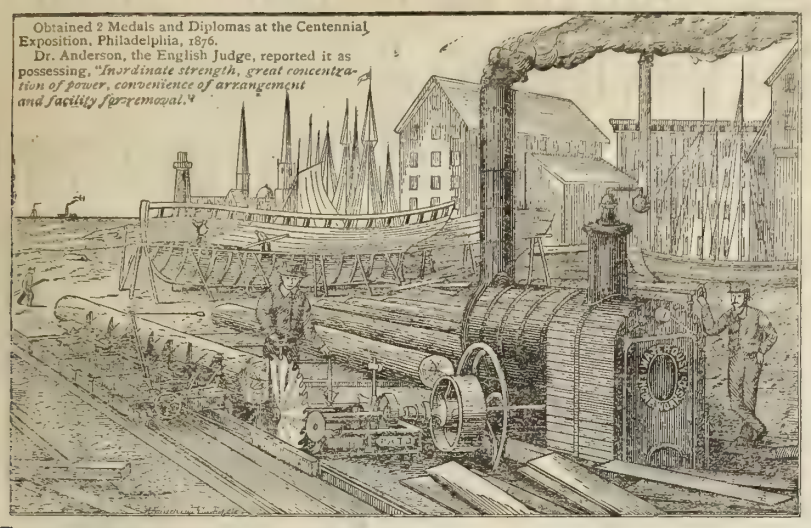

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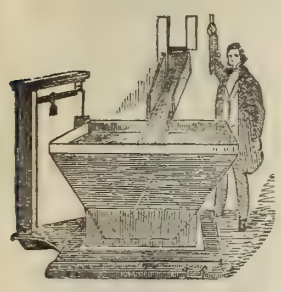

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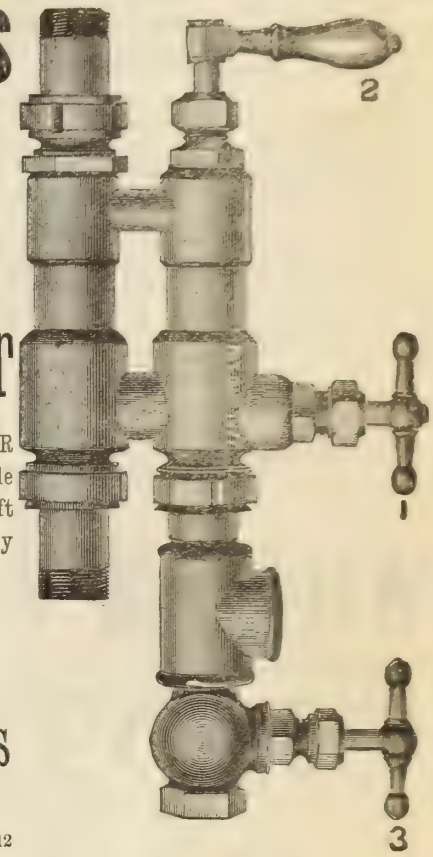

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I would also call special attention to my

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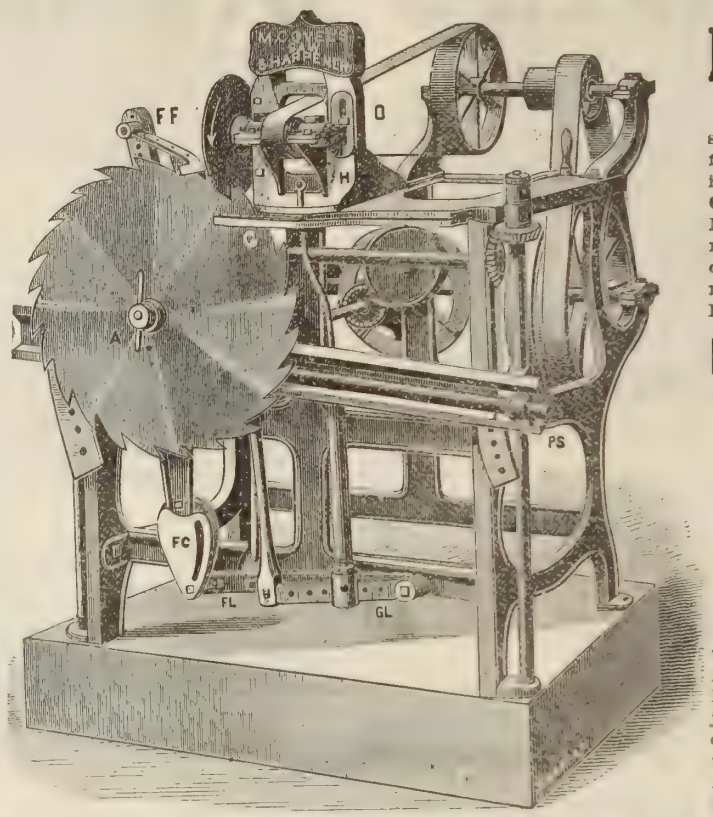
Yours respectfully,
WILLIAM TAIT,
Lumberman, Gravenhurst.

TORONTO, August 11th, 1880.

WM. HAMILTON, Peterborough, Ont.

DEAR SIR—The Steam Feed you put in is working splendidly. Yours, &c.,
THOMPSON, SMITH & SON.



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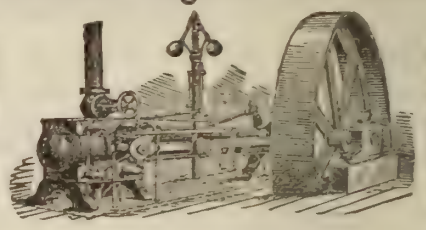

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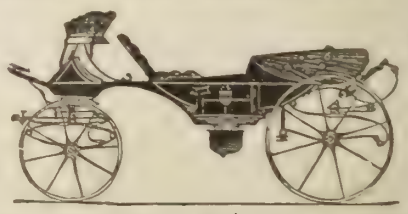

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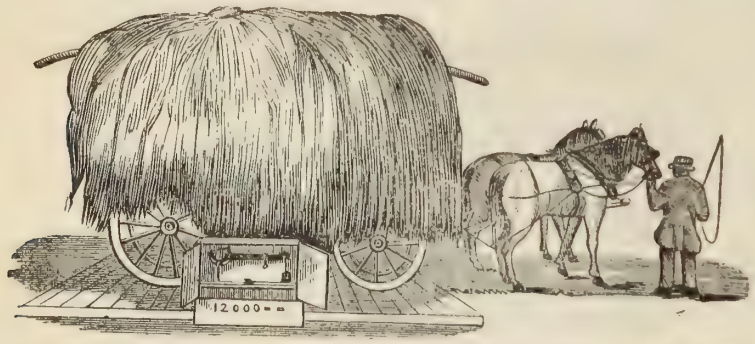

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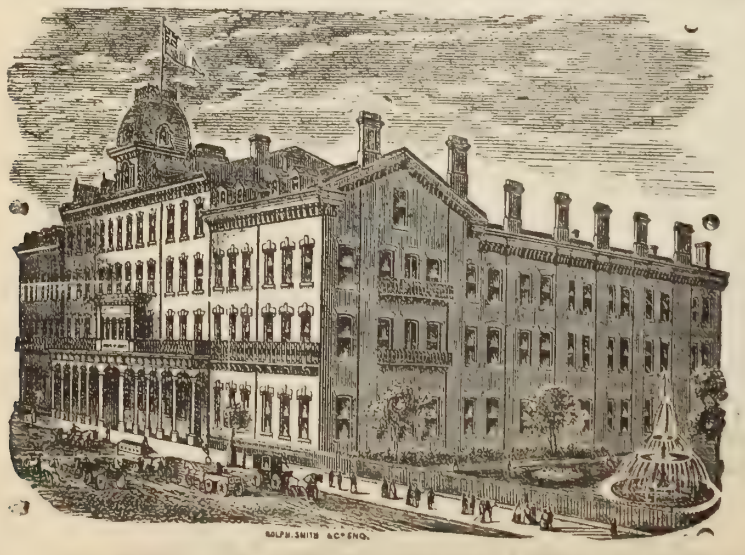

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The Bell Organ Manufactory is the Largest and Oldest in the British Empire, and the fact that we have sold nearly 15,000 proves that they are the best in the market. ☞We guarantee all our Organs for five years. Correspondence invited. Illustrated Catalogue mailed free.

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PUBLISHED SEMI-MONTHLY.

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SUBSCRIPTION $2.00 PER ANNUM.

VOL. 1. PETERBOROUGH, ONT., APRIL 1, 1881. NO. 11.

FORESTRY AND ARBORICULTURE.

BEING THE FOURTH CHAPTER OF THE REPORT OF THE ONTARIO AGRICULTURIAL COMMISSION.

In dealing with the large and very attractive subject of fruit-growing, the Commissioners have had occasion to use only the language of encouragement, but, in connection with the topic they have now to discuss, they have to utter words of warning, perhaps even to give expression to some alarm, for, from the day that the first pioneer settler entered Upper Canada until now, a process destructive to our forest wealth has been rashly, recklessly, wastefully, and it may even be said wantonly, going on.

No one seems to have stopped to inquire into the relations which, particularly in such a climate, the trees of the forest bore to the operations of the husbandman, affected the rain and snow fall, protected the crops, or served any other purpose than to supply fence rails or cordwood.

If the farmer who entered the country fifty or sixty years ago were told he might have secured for himself at this moment, in timber alone, an amount equal to the value of his farm at the highest given price, and that he could have obtained this without sensibly diminishing the area under cultivation, he might be incredulous. But there are, nevertheless, many districts where such an assertion would hold good, where a fortune which might have been saved has been split up into snake fences or sent whirling in clouds through the stove pipe.

Meantime, while men have toiled early and late to shelter themselves and their families—and let us hope their cattle too—in comfortable buildings, and to provide the necessaries of life, they have deprived the "staff of life" of its natural and necessary shelter, and seen, time and again, perish before their very eyes, the wheat and clover on which have depended much of their prosperity.

Small blame, it is true, attaches to the pioneer in a wooded country if he does cut and slash at all obstructions somewhat ruthlessly. The early settlers in Upper Canada often found themselves in circumstances almost desperate. They had neither roads, nor markets for timber if they preserved it, and, surrounded by what seemed to them an illimitable extent of forest, they naturally took small account of what might be the state of things in the days of their grandchildren or their great-grandchildren. But it is surprising to see that, even with the bare facts staring them in the face, our farmers who are practically to-day the owners of the remaining timbered lands of the Provinces in all the settled districts, are in a condition of profound lethargy or innocent unconsciousness of the dangers they invite or the losses they incur.

Still there is time even yet on many farms in not a few of the counties, for waste to be prevented, danger averted, and money saved, if men will only shake off the apathy they have hitherto exhibited, and see the true state of affairs in the light of self-interest, not to say self-preservation.

How little idea of providing against the continued depletion of the forests many of them have, was well illustrated by an incident that occurred during one of the early sittings of the Commissioners. The witness before the Commissioners was a gentleman enjoying beyond most the confidence of his brother agriculturists—an admirable specimen of an intelligent and substantial yeoman. To the question, whether anything had been done in this district in the direction of replanting forest trees, he replied in an almost surprised manner:—

"We do not think that we have reached the miserable condition which requires us to face that difficulty yet. We have more bush than there is in many parts of the West."

But it happened that, just before, this same gentleman had told the Commissioners, that his crop of fall wheat had been saved from winter-killing—by what?—*by the accidental shelter afforded it, not by his own, but by his neighbor's bush.* But for this—the merest chance—one of the best farmers in Ontario would not in all probability have had enough fall wheat to pay for the harvesting. And yet he almost scornfully repudiated the idea of planting a tree.

Nor is this all. Not only have the farmers of Ontario destroyed property of fabulous value, in the clearing process; not only have they denuded their lands of necessary protection; not only have they dried up their streams, and left dry ditches in many places to mark where once existed a valuable water-power, but they have been, and still are, going on very fast with the destruction of their supply of fuel. Instances have come within the observation of the Commissioners, where men who took up bush land thirty years ago have so thriftlessly managed their timber, that to-day they have used the last stick and are actually buying cordwood.

But there is hope yet. Ontario is not the only country that has had to face the situation in this respect, and is to-day, thanks to her prodigious forest wealth, better off than many. If some choice woods are nearly exhausted, many others of high marketable value still remain. There are, in the settled counties of Ontario, and altogether exclusive of free grant territory, containing every variety of timber used for economical purposes, forests as extensive in area as some not unimportant European principalities. The woods of Ontario consist principally of the elm, oak, ash, hickory, butternut, maple, beech, chestnut, poplar, birch, cherry, basswood, hemlock, cedar, tamarack, cotton wood, ironwood, whitewood or tulip tree, willow—where it has not been wholly destroyed—the walnut; and in addition to this the pines, balsams and spruces, in great variety. And all these have now a recognized place in the markets of the world. It is not the duty or purpose of the Commissioners to discuss the relations of the Government to the lumbermen, or of the latter to the settler. They look at this question solely as it affects the interests of the agriculturist, and through him the country, and while, as may be pointed out, the cultivation of the pine and other coniferous trees is to be encouraged on various grounds, it is with the deciduous (generally known as hardwood) trees they are most largely concerned, so far as relates to the question of timber supply or cultivation.

It is proposed, therefore, now to notice:—

1. The management on cleared farms of the bush, usually from five to twenty acres in extent.
2. The economic uses of the several varieties of timber.
3. The market value of various woods.
4. The age of trees maturing, and conditions in which they are merchantable.
5. Tree planting including choice of trees, methods, and cost.
6. The construction of wind-breaks or shelter belts in fields and orchards.
7. The planting of trees and shrubs for ornamental purposes.

Coppices.

The subject of coppices, or the cultivation of young timber from the stumps of a former growth, is discussed in Dr. F. B. Hough's very able report of 1877 to the United States Bureau of Agriculture. Some of the information given by Dr. Hough under this head will be of practical interest in the present connection. Dr. Hough says:—

"The coppice is a growth of timber of various deciduous kinds, from the stumps of a former growth, and is usually cut before maturity, at intervals of from ten to forty years, according to circumstances and the uses to which the product is to be applied.

"This mode of cultivation is in great favor for the growth of firewood, and the smaller wood used in various industries, and is the means by which tanning materials are often produced from the oak, where reliance is necessarily had upon this means for supplies.

"The coppice of short period produces hop-poles, and the stakes and vine-props so much used in vine-growing countries, and in many parts of this country may be able to supply, with but little care beyond protection, the fencing material and other woods required for farm purposes. It is destined to be in future of great importance in the growing of poplars for paper-making.

"The trees that sprout best from the stock are the ashes, elms, oaks, poplars, cottonwoods, willows, chestnut, linden, mountain ash, maples, sycamore, birches, alders, and hazel. The beech will reproduce but slightly, except in very favourable conditions, and the conifers not at all, with the single exception of the California redwood.

"Whatever may be the effect upon the durability of the timber by cutting at particular seasons, we have, in case of coppice growth, no alternative choice, and must cut in winter, and, by preference, toward the approach of warm weather but before the sap starts, as at this time alone will the stumps be in best condition for sending up a vigorous crop of young shoots. The months of February, March, and first part of April are generally best for this labor.

"In cutting, with the view of reproduction, the stumps should be left low, and the tops sloping and smooth, so as not to admit water. It is sometimes the practice to dress off the stump in a convex form with an adze, taking especial care not to separate the bark from the trunk. It is along this line of union, between the wood and the bark, that the young shoots start, and if separated they will not sprout.

"In the cutting of coppice woods it is often the practice to leave a certain number of choice trees of the more valuable kinds to grow to full maturity, and thus acquire a much greater relative value than if cut small. These reserves may be kept through two or three periods or 'revolutions.' They influence the young growth by their cover and shade, and when properly distributed may be, on the whole, beneficial rather than injurious to the future crop. They should not cover more than a twentieth, or at most a sixteenth, part of the whole surface. As same stocks will be weakened by repeated cutting, care should be taken to secure new roots from time to time, and one means of doing this is to bend down the tops of some of the sprouts and bury them partly in the soil, by which means new roots will in some species form, and when fairly established they may be separated from the stock. Such sprouts should be held down by hooked stakes, and the tops kept in position by a piece of sod."

It will be seen from the foregoing how important a source of wood supply, and of income too in many cases, the gradual and judicious removal of the larger trees, and the careful and intelligent cultivation of a second growth may become. If in clearing up land a strip or belt of timber were left on the north and west sides of every ten or twenty acre lot, and intelligently handled in the way suggested, not only would a very excellent wind-break be maintained, but the farm would yield two crops annually in place of one, with very little loss of space, and with, probably, a gain rather than a loss in the value of the grain crops.

Preservation of Standing Timber on Farms.

The usual treatment of the standing timber on a farm, unless cleared to be used as a grove, or where it consists wholly of sugar maples, is unscientific and wasteful to the last degree. Its final disappearance is looked upon as inevitable,

and the process of chopping and clearing mows it down as surely and steadily if not quite so rapidly as a reaper the field of grain. Now, in most cases, by selection and good judgment, the bush may be saved, and enough timber for all useful purposes still obtained. In a very interesting and comprehensive letter to the Commissioners, the Hon. George W. Allan, of Toronto, alludes to this particular matter.

He says :—

"And here let me remark in passing, that, in this country, where tree growth is so rapid, if every farmer who has not been so recklessly improvident as to leave himself without a few acres of bush on his farm, would only manage his bit of woodland, be it twenty, fifteen, or even ten acres only, carefully and systematically, it would keep him, and his children after him, supplied with fuel, and to a great extent with timber for fencing and repairs on the farm.

"I have known instances of pieces of woodland of from twenty to twenty-five acres in extent, which have been thus systematically cut now for twenty years and upwards; no tree under a certain diameter was allowed to be touched; all the young growth of beech, oak, maple, elm, etc., was carefully protected; and the result has been that these comparatively small reserves have continued to furnish, under the same management, sufficient firewood for the wants of their owners, as well as much useful material for repairing fence, gates, and out-buildings.

"On many farms in Ontario, however, not an acre of wood is now left, and on many more, the small reserves are rapidly dwindling away, so that planting would seem to be the only means of providing—at least in country districts—a supply of firewood for the future, unless our farmers are to burn coal, and become dependent in a great measure for their fuel on a foreign country."

By selecting (1) such trees as are in demand for mechanical purposes, and (2) those of an inferior class, for fuel; carefully cleaning up all mere rubbish, and encouraging the development of seedlings and second growth by judicious thinning, the timber crop will be literally perennial. Where too, it is necessary to clear, belts, or clumps of second growth, may be profitably left to form shelter belts in the first instance, and timber-yielding plantations in due course. In the course of his address to the Commissioners, Prof Buckland mentioned a little incident within his experience, bearing on the last suggestion. He said :—

"The question of raising trees from second growth is a practical one, and I am aware of at least one instance in which the plan was successful. About thirty years ago I was staying a few days with a farmer in Prince Edward County, who was clearing up eight or ten acres of bush and burning it. Three or four acres were covered with second growth maple, and I persuaded him to leave that for the purposes of a sugar bush. He did so, and now it is one of the most beautiful little sugar bushes you can find in Ontario. This, of course, could only be done where the maple is the predominant wood."

Puget Sound Fir-Trees.

The fir-tree growths of Puget Sound form one of the wonders of the American world. They average 200 feet in height, and some specimens have been cut that measured 320 feet in length and twelve feet in diameter at the base, with a straight and well-proportioned log length of ninety feet to the first limb. The cedar trees are in like proportion and are most valuable for wooden wares of all kinds, while the firs are the best for spar and ship timber yet found in any country. There are few nations that do not use them in ship-building. One fourth the wealth of San Francisco was culled from the firs of Puget Sound while the Government slept, and to-day all the principal steam mill owners who saw and prepare for market from 100 to 200,000 feet a day to each mill—and there are thirty or more mills—are residents of San Francisco, where they invest their profits, to the great injury of residents of the Sound. There is, apparently, no exhaustion of the timber, and a century will possibly elapse before Puget Sound forests will be cleared of their immense resources of varied tree growths.

ONTARIO WOODLANDS.

THE UNCLEARED LANDS IN THE OLDER PARTS OF ONTARIO.

Among other informafion placed before the public for the first time by the report of the Agricultural Commission is a mass of statistics relating to the state of the land in every township in the Province. From these figures we are able to learn exactly how far the work of deforesting the country has actually gone, and how much further it is likely to proceed before a stable ratio between the cleared and forest land is reached. We have compiled, from the digest by counties of the township reports, a table showing the total area of each country and the area of cleared land therein, and have calculated the percentage of land which is still under forest. Bearing in mind the frequent outcry about the destruction of our woodlands, it may be anticipated that the first thing to strike the reader will be the great number of acres still uncleared. even in such old and densely settled countries as those of York and Middlesex.

ACREAGE OF ONTARIO COUNTILS, NUMBER OF CLEARED ACRES, AND PERCENTAGE OF UNCLEARED LANDS.

	Total Acreage.	*Acreage Cleared.*	*Per cent. Uncleared.*
Brant	223,215	170,311	24
Bruce	760,836	331,896	57
Carleton, not including Marlboro'	505,815	218,393	59
Durham	366,336	248,153	32
Northumberland.	442,392	291,450	34
Elgin	441,896	237,421	46
Essex	422,646	147,019	66
Frontenac	662,312	199,024	70
Grey	1,171,350	562,004	52
Haldimand	279,596	183,418	33
Haliburton	not known	23,418	
Halton	223,930	164,075	27
Hastings	885,411	390,943	58
Huron	795,829	440,338	45
Kent, excluding Camden	533,063	217,964	60
Lambton	665,902	216,944	66
Lanark, excluding Elmslie	600,764	222,782	64
Leeds and Grenville	741,451	443,796	40
Lennox	361,096	172,039	52
Addington. excluding Effingham	321,030	10,305	97
Lincoln	191,459	133,045	31
Middlesex.	753,692	478,479	37
Norfolk	389,418	203,769	48
Ontario	480,030	269,147	45
Oxford	470,376	315,587	33
Peel	289,294	232,887	20
Perth	518,007	278,152	47
Peterborough, excluding Burleigh	476,334	259,334	46
Prescott	283,848	95,887	66
Prince Edward	229,772	167,924	27
Renfrew	685,404	204,836	79
Simcoe, including part of Muskoka	1,320,327	469,565	65
Dundas	237,498	120,731	49
Stormont	251,909	115,474	55
Glengarry	287,445	133,039	53
Victoria, excluding Laxton, Digby, and Longford	772,590	236,766	70
Waterloo	305,250	220,517	28
Welland	228,946	141,418	38
Wellington, excluding Nichol and East Garafraxa	773,250	439,894	43
Wentworth	272,190	197,586	27
York	540,271	392,513	28

It will be observed that in only two counties —Peel and Brant—is there less than 26 per cent of the land still in forest. Of counties still possessing more than a quarter and less than a third of bush land there are nine—Durham, Haldimand, Halton, Lincoln, Oxford, Prince Edward, Waterloo, Wentworth, and York. In twelve counties the bush land is more than one-third and less than one-half of the total area, namely, in Northumberland, Elgin, Huron, Leeds and Grenville, Middlesex, Norfolk, Ontario, Perth, Peterborough, Dundas, Welland, and Wellington. The following counties have more than a half and less than three-quarters of their lands still in forest :—Bruce, Carleton. Essex, Frontenac, Grey, Hastings, Kent, Lambton, Lanark, Lennox, Prescott, Stormont, Glengarry, Victoria. And the following have more than three-quarters of their forests still standing :—Addington, Renfrew.

We have some recollection that a French Commission on forestry reported, after a careful investigation, that one-sixth of the whole face of the country shall be clothed in forests in order to secure favorable conditions for agriculture. Bearing on the same point we may mention the fact that any farmer of a hundred acres of good land in Ontario who has ten acres in bush considers that an ample allowance. According to this, none of our counties have as yet approached alarmingly near the point of danger, and it is to be hoped that in those counties which are nearest exhaustion, the reckless waste of the early days will not be practised hereafter. The trouble with our farmers is that the forests which are still standing are not by any means evenly distributed. There are hundreds of farms so stripped of wood that the owners have to purchase fuel. The condition of these farms ought to be, and probably will be, a sufficiently impressive example to deter the owners of woodlands from further lavishing of their resources.—*Globe.*

THE INDUSTRIAL CONDITION OF CANADA.

A couple of years ago our Canadian neighbors, tired of the industrial stagnation, adopted a protective tariff in the hope of developing home industries. A return to a free policy is strenuously insisted upon by many Canadians, whose idea of national economy never rises above the sophistry of "buying in the cheapest market."

In an argument for the policy now under trial the *Industrial World* of Montreal describes a very hopeful state of things as its first fruits, and points out the obvious conditions of the new prosperity :—

"Suppose, for instance, a factory is opened in Montreal, giving employment to 1,000 hands, what does this mean? One thousand factory employees will represent a population of at least 2,500. What would the closing of this factory and consequent expiration of these craftsmen mean? A loss of 1,000 to 2,500? Much more. These artisans require boots, shoes hats, caps, meat, bread, roots, vegetables, medicine, clothing, houses, wood, etc., almost *ad infinitum*, and likewise each of the new or additional industries which they inaugurate to add to in all its various forms, require the same things. So that each thousand artisans probably adds, in one way or other, 5,000 additional to the population. Have our free trade friends ever considered this? What emptied one-fifth of the houses of Montreal under the late regime? The closing of the factories. What studed the growth of the city during that dark era? The impediments which the tariff raised to the establishment of new industries and the development of diversified labor. All the artisans employed in the factories of the metropolis wanted homes. It required carpenters, joiners, bricklayers, painters, plasters, roffers, glaziers, workingmen of all kinds to erect these houses. It required vast quantities of agricultural produce to fill the stomachs of the various craftsmen which the tariff furnished with a purchasing power. And although to-day the same clouds float over us, the same sun, moon, and stars light the heavens by day and night, in the language of Webster, How altered! and how changed! Of 2,000 notes falling due on the 3rd of February in the Bank of Montreal, not one was protested!! Among the thousands of vacant houses in Montreal in '78, not an empty place is to be found, and the demand is for hundreds more. The market is flooded with money for investment. Canada fours are worth more than Canada sixes were formerly. Our alms houses, except for the old and infirm, are empty, and the soup kitchen is now a matter of history. The railways are unable to carry the freight offered to them, and the demand for increased accommodation is met by the employment of thousands of able hands, working night and day to meet the public wants! Never was there an era promising greater prosperity for Canada. Bank stocks have appreciated 37½ per cent, and all securities have become correspondingly improved in value, and the prospect of a £5,000,000 surplus for the financial year ending July 1st stares us in the face to terrify us into a free trade policy! If it is a bad policy to swamp horses while crossing the stream, we think it would be rather imprudent to risk a change from prosperity, under protection, to one of promised increased (?) aggrandizement under free trade."—*Scientific American.*

Effects of Advertising.

Mr. Alsop, of the Steam Cabinet Works. Broadmead, Bristol, has just executed a furnishing order for South Africa. The sender admitted that he had only heard of Mr. Alsop through the columns of an English newspaper.

SUPERIOR QUALITY OF SAW LOGS.

A "Traveller" writes to the Pembrooke *Observer* as follows :—

"In passing round by the Schyan the other day I could not help remarking the quantity and quality of saw logs manufactured by the Messrs. Bronson & Weston on that stream, and never was I more surprised than when observing those logs which are large and of the very best quality, being of the finest yellow pine. As a great many of them are taken out by jobbers and culled on the river, it is a good sign to see so little red chalk, which indicates culls, and deals out destruction to the jobbers. I opine it did not cost the company much this year for crayons. The reason my attention was more particularly drawn to these logs was that the limits from which they were taken belonged to the late John Egan. After his death their working was carried on by trustees, they were pronounced by the agent to be of little value, and were sold by public sale and knocked down to the company for a mere trifle. Alas for men's judgment in these days. I have been informed that the Messrs. Bronson & Weston will have about one hundred thousand logs taken from their Schyan limits this winter, part of which will go down by Black River. I did not see all their logs but was told they were all of A 1 class. I can safely say the Schyan river will produce more first-class logs in proportion to quantity than any tributary of the Ottawa. I must not forget in passing, that Mr. Richard Fraser, of Pembroke, has a few thousand logs near the mouth of the Schyan which are well worthy the attention of intending purchasers, as I understand they are for sale, they are a fair average and good quality. On my arriving at the mouth of Schyan I could not help taking notice of the improvement being made on Capt. Thibeaudeau's screw steamer, the *Walter B.* He is getting her renovated and enlarging the first and second deck. This will have ample room to accommodate the travelling public the ensuing summer and autumn. There is an appearance of prosperity over all parts of this section. I see Wm. Leroy's wharf is well filled with wood, I believe for the use of the Union Forwarding Company's steamers; it looks encouraging to see all these preparations making for the next summer's business. With a railroad running along side, it is surprising to see all the teams that are drawing up loading for the Upper Ottawa. I could not help thinking there must be something wrong. Do they charge too much for freight on the Canada Central? All the better for the farmers and hotel-keepers along the road."

THE EASTERN TOWNSHIPS.

Lumbering interests in the Eastern Townships of Quebec are this winter very brisk. Especially is this the case along the line of the South Eastern R.R., which, with its several branch lines, has done much to open up sections of the country containing large quantities of spruce and hemlock standing timber, which have heretofore been unavailable. A Montreal correspondent who has just spent several days in the township of Roxton, reports lumbering operations in that vicinity as being very actively prosecuted. There are large tracts of land there covered with hemlock, which has heretofore been cut solely for the sake of the bark for tanning purposes. Thousands of trees lay rotting in the bush, but since the completion of the railway between Sutton Junction and Sorel, which affords direct access to the American market, all the available timber lands have been bought up. Messrs. Prouty & Miller, a considerable lumbering firm, of Newport, Vermont, have built a fine mill at Roxton Falls; Messrs. Cosgrain & Lee, who hold some 4,000 acres of timber land, expect to get their new steam mill running in a week or so, and have already sold all their cut hemlock to a North Troy, N.Y., concern. Three or four other mills are in course of erection in the same neighborhood, and the general business activity prevailing is in marked contrast with the state of affairs which existed a few years back, when railway facilities were wanting.—*Monetary Times.*

A PROMINENT lumberman in Burlington has had his coat of arms painted on the panels of his carriage with the Latin motto "Vidi," which by interpretation is "I saw."

THE FUEL OF THE FUTURE.

THE DISCOVERY AGAIN CLAIMED—WHAT IS SAID ABOUT ATOMIZED PETROLEUM AND SUPER-HEATED STEAM.

Reports current among engineers and others interested for some months past were only the prelude to disclosures which must excite the industrial world. The main fact is the production of a new fuel, from the combination of petroleum and steam, from which intense heat is instantly generated, under perfect control, and at an expense so insignificant, compared with coal, as to promise results of an importance not easily exaggerated. This is the conviction of all present to-day who witnessed its practical operation at the smelting works of G. D. Mackey, in Grand street, Jersey City, where he has had liquid fuel in use for a considerable time, but meanwhile avoiding observation. The explanation of the methods and principles was volunteered by Colonel John C. Rose, of the Pennsylvania Railroad Company. But the simplicity of the arrangement was not the least remarkable of the whole. To produce combustion, nothing more is necessary than

BY MEANS OF AN ATOMIZER

to unite dry steam and crude petroleum, only a common inch pipe being used for this purpose, one for steam, the other for oil, with cocks to regulate the flow. The junction is made within six inches of a perforated brick retort, which the nozzle enters, and instantly, on a match being applied, the whole interior of the furnace (an ordinary reverberatory smelting furnace) becomes intensely heated, so much so that all the exposed surfaces may be easily fused. If applied to a steam boiler, on a locomotive, or on shipboard, it is only necessary to place the retorts, made of fire clay, on the grate bars, thus protecting the boiler plates from injury. Said Colonel Rose: "We can now run a locomotive from New York to Phiiadelphia for four dollars instead of an expense of some $25, as at present, with coal." More than this, the fuel creates no gas, smoke, ashes or cinders—in corroboration of which statement the spectators were asked to observe the interior of the furnace and the opening of the flue above the roof. Mr. Mackey reminded the spectators of what liquid fuel might do for the elevated railways, and of the revolution to be affected in steam navigation. Said he: "We have the system in perfect working in a boiler at the Jersey City water-works in Belleville, and have demonstrated more than what we have said to be true." "Why," said he, "we have only to make a retort full of holes, where the gas is generated, and placing it on the grate bars of any furnance nothing else is required but to turn on the steam and oil, or as for that matter, coal tar or the refuse of an oil efinery will do just as well, and one fireman can tend to a dozen furnaces just as easy as one, for all he has to do is to keep up steam." He affirmed that the new motive power could be used at

ONE-EIGHTH THE COST OF COAL.

Indeed, the cost was so trifling for ordinary purposes as to be too small for easy calculation. The gentlemen present engaged in a general conversation, expresssing themselves in reference to the great changes to take place in running engines and machinery, all seeming to be firm in the faith that great results are in the immediate future.

Mr. McCrae, superintendent of the motive power on the Pennsylvania railroad, said immediately: "This is just the thing we want and have been long trying for." The only difficulty heretofore has been in the combustion—in the mode of applying the fuel. On the New Jersey Midland railroad, not long ago, they thought they had the right thing beyond a doubt, and went so far as to organize a company, with $2,000,000, to apply it, but the plan did not work. Several of the steamship lines, too, have tried it, with no better success. The atomizing process, however, with super-heated steam in combination, is accepted as the true solution of the difficulty. It is observed that the dryer the steam the greater is the power, and so the present purpose is to turn the pipes supplying steam directly through the furnace, so that the combination with the oil shall take place after the steam has been heated to the highest degree attainable. As yet the mechanicism employed is of a very crude character, but is susceptible of a perfection which shall set at rest all questions concerning the feasibility of a practical application.—*N. Y. Commercial Advertiser.*

THE CHICAGO LUMBER TRADE.

At the recent meeting of the lumber dealers of Chicago, B. L. Anderson gave the following resume of the lumber trade of that city during the past 20 years, with some sensible deductions therefrom:—

"Lumbermen of 1881, what is our duty at this time? To rightly understand and appreciate the true condition of our trade. To do this, facts must be ascertained, and after we have made the correct deductions therefrom, it is our duty to outline and follow the policy that shall most surely remunerate us for the investment of our time and capital. Facts and figures, I am aware, are rather dry food so soon after lunch; but it is for our present and prospective good to look at a few of them. From 1861 to 1865 the average receipts were 425,000,000 feet, and the average stocks on hand Jan. 1, 86,000,000; from '66 to '70, the average receipts were 931,000,000, and the stocks 215,000,000: from '71 to 75, the receipts averaged 1,110,000,000, and the stocks 306,000,000, and from 1876 to 1880, the receipts were 1,263,000,000, and the stocks 394,000,000. In 1860, the total receipts were 262,000,000 feet, and the stock on hand Jan. 1, 1861, 36¼ per cent., or 94,000,000 feet; in '65 the receipts were 647,000,000, and the stock on hand Jan. 1, '66, 137,000,000, or 21¼ per cent.; in 1870, the receipts were 1,018,000,000, and the stock at the end of the year, 298,000,000, being 34 per cent. of the receipts; in 1875 the receipts were 1,147,000,000, the stock 352,000,000, and the percentage 30½; and in 1880, the receipts were 1,564,000,000, the stock at the close 497,000,000, and the percentage 32. Prior to 1876, there were no monthly accounts taken of the stock in the yards, and I cannot, therefore, show the average percentage during the year, before that time. In 1876, however, we find that, with receipts aggregating 1,039,000,000 feet, the average stocks, as shown by the inventories taken on the first of each month, were 303,000,000, or 30 per cent., while the stock on hand Jan. 1, was 352,000,000, or 33¾ per cent. of the receipts; in '77 the receipts were 1,065,000,000, the average monthly stocks 305,000,000, or 30 per cent., and the stock Jan. 1, 369,000,000 or 34½ per cent.; in '78, the receipts were 1,180,000,000, the monthly stocks 333,000,000, or 28½ per cent., and the amount on hand Jan. 1, 385,000,000, or 32½ per cent. of the receipts; in '79, the receipts were 1,468,000,000, the average stocks 407,000,000, or 27¾ per cent., and the 1st of January stock 410,000,000, or 28 per cent., and in 1880, with receipts of 1,564,000,000, the monthly average of stock was 404,000,000, or 25 per cent., and the amount on hand Jan. 1, 451,000,000, or 28½ per cent. of the total received.

"To appreciate correctly these figures, there is one very important element to be borne in mind; namely, that previous to 1876 considerably more than 50 per cent. of our receipts were shipped green from our yards and railroad docks, whilst now, 25 per cent. of green shipments would be a very liberal amount to estimate. My own opinion, however, is that from 15 to 20 per cent. of green shipments is more nearly the correct amount, which fact, of itself, necessitates a largely increased stock of dry lumber, over and above what the yards have carried hitherto. Hence, in view of the receipts of 1880 being 1,564,000,000, I estimate that we ought to have had on hand on Jan. 1, a stock of not less than 600,000,000, taking into consideration the largely increased demand of 1880 and the prospective demand for 1881,; instead of which, all we had on hand Jan. 1 was 497,000,000—fully 20 per cent. less than we ought to have had. Hence arises the unwisdom of any alarm about the stock on hand being excessive.

"The fact is, if we want to hold the trade we have acquired, and increase it, we must of necessity have a largely increased stock of dry lumber all the time on hand for shipping to points where we come into direct competition for the trade of those points. Which of these policies we shall pursue will determine whether we are as wise in our day and generation as our worthy predecessors were in theirs."—*Lumberman's Gazette.*

LOSSES BY FOREST FIRES.

We some time ago stated that the Superintendent of the Census had placed all that relates to Forestry, including lumbering, and whatever concerns forestry as a source of national wealth, in the hands of Prof. C. S. Sargent, of the Arnold Arboertum of Harvard University. How thorough his investigations would be, those who know him need not be told. In a general way we may say that his own journeys to the Rocky Mountains and to the Pacific, as far as the forests of Washington territory, his employing of local agents, and the sending of experts to important localities, have been but a part of his labors. To show how every ramification of the subject is provided for, we may refer to the circulars sent out to collect information as to forest fires. We often see articles in the journals lamenting the destruction of our forests by the demand for railroad ties and fuel; the wanton waste in clearing for farms, and the rapid destruction by lumbermen. It is believed, by those best able to judge, that the destruction of our forests by fires, is greater than from all other causes together. It is also known that such fires are annually increasing in number. It is believed that these fires are mainly due from avoidable causes, and that proper legislation is needed to prevent this useless waste of national wealth. For proper measures of prevention to be taken, it is an important point to know just the extent of the evil, and this it is proposed to learn by means of the Tenth Census. Prof. Sargent has prepared a circular to be addressed to the town officers in all parts of the country where forest fires may occur. This blank form, which can be readily filled, asks for the number of acres, or square miles of forests destroyed by fire in 1880, the value of the property thus destroyed; causes generally producing such fires, and any suggestions relating to the general subject of forest fires and how they may be prevented or diminished.—*American Agriculturist.*

FOREST PRESERVATION.

The Brantford *Telegram* says that much has been written lately in reference to the preservation of our forests, but still the reckless waste of fire and axe goes on. Notwithstanding the statutory laws for the prevention of forest fires, there is no effectual check to prevent our valuable forests from being willfully or aceidentally swept away by fire during the dry summer months. The Orillia *Packet*, referring to the subject, calls attention to the scarcity of firewood in some of the older settled townships, which, heavily wooded a few years ago, now, with the exception of their hilly condition and line fences, look like prairiee. Farmers within the radius of twenty miles from cities and large towns are commencing to burn coal, so that the question of fuel supply is a serious one, and will have to be faced within a few years. But apart from this the absence of forests will produce a deleterious effect upon our climate—creating, as the experience of other countries shows, atmospheric changes, anything but beneficial either to the crops or conducive to the comforts of living. We should see to it that at least our tracts of woodlands, which represent thousands of dollars, are not mercilessly left to the incendiary or criminally careless sportsman, but that Forest Rangers be appointed to take charge of our back forests and other non-resident wooded lands, and see to it that in case of fire the flames will not be allowed to devastate, without opposition, vast tracts of country, leaving nothing but a ruined waste. Probably the best plan would be for the Local and Dominion Governments to appoint a joint commission to investigate the subject, and submit proper regulations on Forestry in general.

Got Up in the Very Best Style of the Art.

We have to thank the publishers, Messrs. Toker & Co., of the Peterborough REVIEW, for a specimen number of THE CANADA LUMBERMAN, hitherto published at Toronto, by Mr. Alex. Begg. It is got up in the very best style of the art, and speaks most favorably for the enterprise of its new proprietors. Published semi-monthly, at $2 a year; 16 pages. The only work of its kind published in the Dominion. In our next we purpose giving extracts from its "Introductory" articles, which will more fully explain its mission.—*Millbrook Messenger.*

TIMBER RESOURCES

The forestry division of the Department of Agriculture, national Government, has been engaged in attempting to ascertain the timber resources of the country, in connection with the tenth United States census. The work in the States of Michigan, Wisconsin and Minnesota, has been under the supervision of H. C. Putman, of Eau Claire, Wis., whose researches have so far progressed that an approximate estimate of the amount of standing pine in the three States has been reached. From what we learn of the method pursued in obtaining the figures it is judged that the result will be a nearer approach to a knowledge of the actual timber resources of the country than has ever before been obtained. To be sure, there has been a reliance upon estimates, but they have been more closely scanned and compared and have gone more into particulars. The results secured in the three States named are these:

Minnesota will be credited in the census reports with containing 6,150,000,000 feet of standing pine, distributed as follows: Rainy Lake and tributaries, 350,000,000; Red River and tributaries, 600,000,000; St. Louis and Cloquet rivers, 1,500,000,000; Mississippi and tributaries, 2,900,000,000; North Shore of Lake Superior, 800,000,000.

The State of Wisconsin is credited with 40,500,000,000 feet, distributed in districts as follows: St. Croix river and south shore of Lake Superior, 6,000,000,000: Chippewa and tributaries, 12,500,000,000; Wisconsin and tributaries, 11,000,000,000: Lake Superior district east of range 11, 2,000,000,000: east of the Wisconsin river, 9,000,000,000.

Michigan is credited with having 35,000,000,000 feet of standing pine—6,000,000,000 in the upper peninsula and 29,000,000,000 in the lower peninsula.

The aggregate in the three States is 81,650,000,000 feet.

This is much less than the amount of pine supposed to be standing in these States, but there is no means of ascertaining whether the figures given include only the bodies of pine which in the present condition of lumbering operations are regarded as profitable to lumber, omitting lands which have been culled but which still contain a considerable amount of pine which will eventually be cut, when the decadence of timber shall sufficiently advance the price of lumber.

There is quite a probability that there will be a goodly quantity of pine cut in the three States after the reports show the 81,650,000,000 feet of the census bureau's finding have been manufactured, which will be in about 11 years at the present rate of cutting.

At the present rate of cutting the pine in Michigan will last 10 years, if the figures above given are proper representatives of the amount now standing.—*Lumberman's Gazette.*

Important Function to Fulfil.

THE CANADA LUMBERMAN.—We have received from Messrs. Toker & Co., Peterborough, a copy of this semi-monthly published by them. It is a sixteen page quarto, and its typographical appearance and make-up are exceedingly neat, such as one would expect the REVIEW establishment to turn out. The prospectus announces that the LUMBERMAN will be a "purely trade organ and entirely non-political." "All information of value to the trade at large will be diligently collected and matters of interest to them will be discussed and advocated." And judging by the number before us this promise will be faithfully carried out. This journal as the guardian of one of the most extensive interests of the Dominion has a most important function to fulfil and the promise of the initial numbers is a good indication that this importa duty will not suffer at the hands of THE CANAD LUMBERMAN. The single number before us appears for its varied and interesting contents to be worth the price of subscription ($2.00) for a year to anyone to whose interests they appertain We give it our best wishes for success.—*Napanee Standard.*

THERE are now six European countries whic refuse to allow the importation of pork from the United States, viz.: Russia, Italy, Spain Portugal, Greece and France.

Chips.

In Chicago 3,411 men find employment in the lumber yards, and 2,761 men and 265 boys in the planing-mills.

During January and February, 9,597,043 feet of lumber were exported from New York, the West Indies taking fully half of it.

A cord of second-growth, dry oak wood, by actual test, weighs, 2,948 pounds, and a load of green, of the same kind, 4,820 pounds.

It is said that it will crowd the mills of Orange and Beaumont, Texas, to fully meet the demands even of the railroads this year.

The Muskoka *Herald* says: The Muskoka Slide, Dam and Boom Company will build a new dam at the falls at Baysville during this season. The company's engineer was taking levels and making measurements for the work last week.

Mr. Arthur S. Pierson, of Harvard, N.Y., has patented a jointer for circular saws, so constructed that it can be readily adjusted to operate on saws of different diameters, and which will bring all the teeth to a uniform length. It is an ingenious, simple, and effective device.

The Flos Lumber Company have erected a new saw and shingle mill of large capacity, not far from the Midland Railway station at Orillia, and already two boilers and machinery are forward, the intention being to have the mill ready for work at an early day on the large stock of logs cut during the winter.

The official figures for 1880 show that the exports of the United States have increased to the enormous amount of $889,649,840, exceeding 1879 by $124,490,015. The imports have increased largely, yet there still remains an excess of exports over imports of $192,846,407—or nearly two hundred million dollars for 1880.

A despatch announces that a Minneapolis firm has secured a large order from the Syndicate for lumber for the construction of the Canadian Pacific Railway freight-sheds and depots on the line. It is stated also that 600,000 ties, manufactured on the eastern ssection of the C.P.R., have been bought at reasonable figures.

The Muskoka *Herald* says Mr. T. Halliday is at work with a gang of men improving the navigation (logivation) at Mathiase Falls, by building a pier opposite the one built by the Government four years ago. The present improvement is being done by the Muskoka Slide, Dam and Boom Company, and, if properly carried out will be a great boom to river drivers.

The Fredericton *Reporter* says the people of Quebec are beginning to wake up to the great waste of the hemlock trees, in procuring bark for exportation. The hemlock tree will be a thing of the past in New Brunswick before long, unless some restriction is made. The suggestion to increase the stumpage tax on bark cut for other than local tanning or extract purposes, is a good one.

The Tracadie *Star* says there has been, or will have been by spring, nearly 8,000,000 feet of logs cut on Tracadie this winter. It is principally for R. A. & J. Stewart, and will be sawed at the Tracadie Mills, and thence conveyed to Chatham in woodboats. Mr. J. A. McDonald has now put out 3,500,000 feet on the South Branch of Tracadie, has 13 teams and 90 men in, and works for Stewart.

The Ottawa *Free Press* says that Capt. W. O. McKay informs us that Dosithe Galipaux, Joseph Galipaux, Orphir Philon, and Hermidas Desmarchis, four men in the employ of Mr. A. McLean, cut 155 pieces of square timber on the Upper Ottawa in six days. The timber averaged 54 feet. This is claimed to be the biggest week's work ever performed by four men in the Ottawa Valley.

The Quebec *Chronicle* says the Canada Central Railroad is to blame for the failure of timber merchants to ship timber through to Quebec by rail. It says that line charges more than double the rates of the Q.M.O. & O. Railway, and that Mr. Chapleau has been endeavoring at Ottawa to bring about such a reduction in the rates of the Canada Central as will enable the Q.M.O. & O. Railway to assist in the development of this important traffic.

The Bangor (Me.) *Whig* of the 2nd of March says, that at the annual meeting of the Penobscot Lumbering Association, held yesterday, the following officers were elected: Presldent, W. B. Hayford; Clerk and Treasurer, Abram Moor. Directors, Charles G. Sterns; Joab W. Palmer, Eben Webster, John Morrison, John P. Webber and Jos. M. Hodgkins. The rafting of the logs at the Penobscot boom for the coming season was bid off by Mr. John Ross at the rate of thirty cents.

A scaler in a lumber camp in Gladwin county was instructed to scale out both saps on certain logs. One of the kind was banked which the foreman thought ought to scale 500 feet. The scaler insisted, though, on following directions and scaled out the saps. Later he went around to the other end of the log and discovered it was hollow, and when last heard from he was sitting on a stump scratching his head, for after taking out the hole he wanted just 13 feet of having any log at all.

The Renfrew *Mercury* says that on the limits lately sold by Messrs. Mackay & Smith, there has been cut this season one tree, five lengths of which (each 13 feet 6 inches long) measured one hundred and fifteen standards, and said to contain 23,000 feet of lumber. The smallest end of the smallest log measured 35 inches in diameter. From another tree, a piece of timber 44 feet long by 3 feet square was manufactured. The stump of this tree measured 18 feet in circumference. This limit is within a day's drive of Renfrew village.

The Pembroke *Observer* says that Mr. P. Fitzpatrick, Mayor of Allumette Island, who has the contract of drawing a raft of timber, manufactured on the Coulonge by Bryson & Murtagh, for J. R. Booth, has caught up to the timber makers, and has now between one thousand four hundred and one thousand five hundred pieces conveyed from the bush and deposited on the ice. According to Mr. William Clarke, forest ranger, of Pontiac, the timber will average between sixty-five and seventy feet, and he says it is the best he has seen this winter. The distance which the timber had to be drawn varied from six to eight miles. It is now lying on the Coulonge river, some seven or eight miles above its junction with the Ottawa, and consequently about the same distance from Coulonge village. If the season permits, about seven hundred pieces will be manufactured and added to the timber already drawn.

It is believed that the railroad tie of the future will be cut from the beautiful catalpa tree. The Fort Scott, Texas and Gulf Railroad have planted 900 acres of young trees and the Iron Mountain railroad 100 acres, near Charleston, Mo. On the track bed of the latter company ties of this wood have lain in the muddy silt of the Mississippi for twelve years, and are still in a good state of preservation. They have outlasted two sets of white oak ties, and bid fair to survive the third. Fence posts in Indiana and Illinois are now sound after having been in service for forty, fifty and even seventy-five years. In the muddy regions about Cairo, where it is grown extensively, it is used as "corner stones" for the most substantial buildings. It is of an elastic nature, but not so soft and light as cottonwood. Dr. John A. Warder, President of the American Forestry Association, claims for the catalpa a durablility and power of resistance to the influences of the elements possessed by no other wood. It is found in the Mississippi valley and on the shores of the tributaries of the great river. It bears a large white, highly perfumed flower, and grows quite rapidly.

Deserving of Liberal Support.

The Canada Lumberman.—This journal, the first nine numbers of which were published in Toronto, has been purchased by Messrs. Toker & Co., proprietors of the Peterborough Review. The Canada Lumberman is the only paper published in Canada devoted to the interests of the lumber and timber industries of the Dominion, and being purely a trade publication, is deserving of a liberal support from those in whose interest it has been established. The first number issued by the new proprietors is before us, and is in every respect a credit to them. It is published semi-monthly at $2 per annum.—*Belleville Intelligencer.*

THE DRY LUMBER QUESTION.

At the meeting of the Chicago lumber dealers on Saturday of last week, in response to a resolution of thanks, extended to Mr. T. W. Harvey, who officiated as the host, that gentleman made some very sensible remarks upon the relation of the Chicago lumber trade to that of the country at large. "Chicago," said Mr. Harvey, "makes prices for the entire western country, and the markets of the East are influenced by the action of the dealers of this city in fixing the value of lumber. The qnestion of carrying larger stocks is one which must materially affect the prices of the future. If this market fixes its prices upon the basis of green or but partially seasoned lumber, as must inevitably be the case if the yards of the city do not carry stocks of sufficient extent to at all times insure a full assortment of dry, the markets at other points will be established upon the same basis. The extent of the trade which Chicago shall transact during the coming year, hinges largely upon this question. The total supply, of the year 1879, amounted to 1,850,000,000 feet, of which, in round numbers, 1,400,000,000 feet was disposed of, and the close of the year found us with about 450,000,000 feet on hand. The stock of 1880 aggregated 2,000,000,000 feet, of which 1,500,000,000 feet was sold, and 500,000,000 feet remained on hand for commencing the business of the present year.

"Every indication now points to an increase of not less than 150,000,000 feet in the business of 1881, and we should prepare ourselves for handling not less than 2,250,000,000 feet, including the stook now on hand. This will admit of a disposition, during the season, of 1,650,000,000 feet, leaving on hand, at the close of the season, 600,000,000 feet. That this will not more thau suffice for the wants of the trade, our present condition fully assures us. Entering upon the year with 500,000,000 feet, the first of July will find our dry stocks so far depleted as seriously to cripple our trade for the succeeding three months. We should have closed the last season with at least 100,000,000 feet more than we did, in order to keep ourselves in position to supply the prospective demand which is now indicated.

"And the trade is rapidly increasing. The rapid development of the western country admonishes us that if we would keep pace with it, we must enlarge ou stocks. If we are called upon to receive such a vast amount as 1,750,000,000 feet during the coming season, and the prospect of the winter's logging assures us that we shall be, where shall we sent the 1,650,000,000 feet which I claim we shall be able to dispose of? In answer to this, let me point you to the 10,000 miles of railroad now in course of construction, and call to mind the growth and increase of the towns and villages which are building up as a result of the wonderful era of prosperity which has dawned upon us. And if the country west of us will so largely increase its demands for lumber, what shall we say for Chicago? At no time in the past six years, have so many plans been supplied by the architects of this city for improvements as are now in hand.

"And all this means a demand for dry lumber. We cannot ship it green. The day when 10,000 feet could be loaded on a car and billed as 5,000, has gone by. Everything is weighed, and the lumber manufacturers and dealers of the whole country are in the same boat; all must submit to the weighing process. There may in the past have been a "buy" way, but that is out of the way for us and for a majority of dealers elsewhere. Pools have been formed; all the railroads of the country have become members of what is known as a weighing association, and the pool association has agreed to haul no lumber which has not passed over the scales of the weighing association. This does not apply simply to shipments from Chicago; it includes not only lumber, but everything else, not only here, but everywhere throughout the land.

"Let us, then, see how we are to be affected by it. The average stock of lumber in Chicago will weigh 3,200 pounds to the thousand feet. The average freight is 25 cents per 100 pounds. Dry lumber will average not over 2,500 pounds. If, then, we dry 700 pounds of water out of the lumber, we reduce the freight $1.75 per thousand feet. Lumber weighing but 2,500 pounds is worth fully $1.25 more in our yards than lumber weighing 3,200. By carrying sufficient stock to enable us to season it, we add, therefore, $3.00 per thousand to its value to us. Will not this pay? True, dock rents are high, but the increased value of our lumber will pay the difference of expense in this respect and still leave us a handsome margin, beside enabling us to fill the orders which reach us, with promptness. The manufacturers also must learn to carry a supply at their mills, and thus to share with us in the benefits of cheaper freight and a better price. Dry lumber is what we want, and dry lumber we must have, and we must make up our minds this very season to place ourselves in a position to at all times have it.—*Northwestern Lumberman,*

CANADIAN AND BRAZILIAN TRADE.

The ventilation of the proposed new trade between Canada and the Brazils has so far been in a dormant state as regards practical statistics for the guidance of our commercial and trading community. The *data* relative to this subject has been compulsorily held in abeyance awaiting the consummation of arrangements by Mr. Wm. Darley Bentley (the Brazilian Consul-General) who, since October last, has been vigorously engaged in England and Rio Janeiro conferring with financiers and shipowners for the bringing about of a company to conduct direct service between the two countries. We are enabled on good authority to state that that gentleman's negotiations have been successful, and a company has been formed in London, England, whereby a first-class line of steamships will, almost immediately, come into operation, commencing probably between Halifax and Rio, and performing a bi-monthly trade. The company's capital is stated at $500,000, which, together with the respective subsidies of 850,000 voted by the Canadian and Brazilian Governments, will enable the service to provide such comfort to passengers and freights as, in the past, has not been provided. The prospects of an increasing trade between the Dominion and the Brazils is encouraging to all parties interested; and at once opens up a new channel for shippers to consign marketable produce to more distant ports, where, probably, the field for requirements will enhance the value and more than fully repay the consignor for his speculation. On the other hand, we have exceptional transit offered for Brazilian produce imported into Canada, giving Brazilian exporters facilities for shipment of tropical goods such as sugar, coffee, cocoa, hides, etc., and various articles of farina indispensible in our markets. The specialities of exports to the Brazils include flour, furniture, coal, codfish, dry goods, all descriptions of canned goods (meat and fish), kerosene and petroleum oils, pine wood and lumber in every shape for building purposes. In fact, the interchange of commodities are so numerous that a glance at the import and export trade during the past two years between the United States and Brazil at once implies that similar transactions are adapted to Canadian and South American requirements. It is the company's intention to make one of the West India Islands (perhaps St. Thomas) a port to call *en route*—whereby their interests and the public convenience will be further developed. The rates proposed to be exercised by this service will be of such quotations as to render attractions to shippers, and provide opportunity for consignments of saleable articles to receive the attention of consignees at their destination. The necessity of this service between Canada and the Brazils has long been recognized, and, now that it has arrived at the present satisfactory point for practical work, there is every reason to believe that its merits will be fully entertained by the travelling and commercial community, and ultimately establish such benefits as its promoters and Government supporters have so ably organized.—*Industrial World.*

Improvement on the Old Issue.

The Canada Lumberman has changed hands, and is now published by Toker & Co., of the Peterborough Review. The first number published by them, is before us and presents a very neat appearance, being quite an improvement on the old issue. It should receive the patronage of all interested in the lumber business. Terms $2 per year.—*West Durham News.*

IMPORTS AND EXPORTS OF WOOD.

We have received, from the secretary of the treasury, a summary statement of the imports and exports, to and from the United States, for the year 1880, from which some general facts regarding the trade with foreign countries may be obtained. The value of imports of merchandise for the year, free of duty, amounted to $206,583,345, of which the item of unmanufactured wood is stated at a valuation of $3,229,333—an increase in this class of imports of $943,518 over those of 1879. Of dutiable goods, the total imports of the year amounted to a valuation of $490,222,522—an increase over 1879 of $151,362,883. Of this amount, the following table exhibits the value of wood products on which duties were collected :

Articles.	*1880.*	*1879.*
Furniture and manufactures of wood	$1,325,397	$1,010,162
Boards, plank, joist, etc	6,251,335	3,839,535
Shingles	158,485	90,303
Timber, sawed or hewed	14,435	3,043
Other timber	457,950	208,867
Total, dutiable timber imp't's	8,207,602	5,151,910
" non-dutiable	3,229,333	2,285,815
Grand total	$11,436,935	$7,437,725

From the above table it appears that imports of the products of the forest increased in 1880, over the preceding year, to the extent of $3,999,210, or but a fraction less than 54 per cent. But while importing to the extent of $11,436,935 the exports of wood and its manufactures for the year amounted to $17,333,844, against $15,240,743 in 1879, or less than 14 per cent. increase. The following is a detailed statement of the exports included in these figures :

Articles.	*1880.*	*1879.*
Boards, planks, joist, etc	$4,306,429	$4,042,444
Lath, palings, pickets, etc	12,368	13,048
Shingles	180,176	163,612
Box-shooks	193,805	127,562
Other shooks, staves and headings	3,496,528	3,565,035
Hogsheads and barrels, empty	263,485	257,845
All other lumber	1,053,370	643,336
Fire-wood	11,462	9,810
Telegraph and other poles	298,966	442,128
Logs, masts and other whole timber	671,948	637,179
Timber, sawed and hewed	2,592,077	1,742,622
All other timber	123,940	97,337
Household furniture	1,872,589	1,604,279
Woodenware	312,447	298,430
Other manufactures of wood	1,944,274	1,596,076
Total	$17,333,844	$15,240,743

The above includes only the exports of domestic wood products, and to this should be added the exports of foreign goods, imported and again exported, which were as follows. Duty was paid on everything except unmanufactured wood :

Articles.	*1880.*	*1879.*
Wood, unmanufactured, free of duty	$ 79,420	$ 59,610
Furniture and manufactures of wood	65,883	52,430
Boards, plank, joist, etc	450,185	351,907
Shingles	3,438	1,998
Other lumber	5,270	513
Total of both classes	604,196	466,458
Exports of domestic goods	17,333,844	15,240,743
Grand total	$17,938,040	$15,707,201

At the end of the year, there remained in bond, manufactures of wood, boards, plank, joist, scantling, shingles, timber and other lumber, of the value of $289,752, against a valuation of $219,823 at the close of 1879. The lumber represented in the values given above, in the tables of domestic woods exported, comprising the items of boards, clapboads, plank, joist, scantling and deals, amounts to 279,931,000 feet; lath, palings, broom handles, curtain sticks and bed slats, 4,265,000 feet ; shingles, 60,680,000 ; for box and other shooks, no details are given ; sawed and hewed timber figures at 18,425,438 cubic feet, equal to 221,105,256 feet board measure ; hogsheads and empty barrels are stated at 151,337, and firewood at 4,323 cords. The aggregate of the above items of lumber, timber, lath, etc., is 505,301,256 feet board measure, and adding to this the re-exports of foreign manufacture stated at 46,494,000 feet, we arrive at a grand total of exports for the year, of 551,795,256 feet, although 100,000,000 feet more would not exaggerate the extent of the articles of which the quantities are not enumerated.—*North-western Lumberman.*

An English company offers to invest £220,000 in the Jarrah timber business if the South Australian Government will grant reasonable concessions. It is not probable that any definite answer will be given until after the next meeting of the Legislature.

HOW TO DESTROY THE BORER.

James W. Robinson, Esq., of Fremont, Ill., an ex-president of the Illinois State Horticultural Society, gives the following mode of dealing with that destructive insect, the tree borer :

"The eggs are deposited in the bark of the tree, the beetle puncturing or splitting the bark of the tree upward or downward and a little sidewise, the puncture looking very much as if made with an ordinary pocket-knife. The eggs are usually injected into this puncture so deep as to be out of sight ; but not always. On young and thin-barked trees the eggs will be pushed in next to the wood ; but in older and thicker-barked trees they will only be through the hard outer bark and inner soft bark. As soon as the eggs begin to hatch, which is in a few days after being deposited, its enlargement causes the puncture to open, and thereby it is much easier detected. The young borer hatches out in the inner side of the egg, and eats but a circular piece the size of a half dime ; and then starts off, boring upward at first, but sometimes sidewise or downward. At this stage of development it is easy to detect the young depredator by a few drops of discolored juice of the tree exuding from the puncture and sticking on the bark. The larvæ usually bore down below the ground-surface in the winter, and up again in summer, living in the larvæ state in the tree nearly two years ; then boring out in the form of the beetle, ready to repeat their round again. The remedy I have successfully used is to keep the ground around the trunk of the trees clean and mellow, so that there will be no cracks or openings there for beetles to get in to lay their eggs in the tree, and so that the puncture where the eggs are laid or young beetles may be easily seen, and eggs or insects destroyed, which can be done while in the egg by merely pressing firmly on the puncture with a knife-blade (the cracking of the eggs can be heard distinctly), and, if hatched, by cutting away the dead bark over the cavity first eaten out and killing the young worm. The borers do not get into the wood much the first year and can be easily followed by a knife ; but, if not taken out soon after hatching, they seriously injure, if not entirely kill the tree, especially when they run around just under the bark, as they sometimes do. Or, when several borers are in a small tree, they so injure it that it breaks over with the wind. If the ground is well cleared and patted down smooth around the tree about the last of June, the destroying of the eggs and young borers will be more certain. The trees should be examined twice or perhaps three times a year, if the borers are very numeerous, in order that the first hatched may be killed before they do serious injury to the trees. August, September, and October are the months in which to destroy them. They seem to infest certain parts of the orchard from year to year, while others are comparatively exempt. Low grounds have been more infested with me than higher parts of the orchard. A man can usually examine and kill all eggs and borers in five hundred or more trees per day, if the ground has been properly prepared, and no work in any orchard has been so absolutely necessary."—*Ohio Farmer.*

A Store of Useful Information.

Messrs. Toker & Co., of the Peterborough REVIEW, have assumed the publication of THE CANADA LUMBERMAN. It is a sixteen-page quarto, well and neatly printed, and will be devoted to the interest of the great lumbering industry of our country. The LUMBERMAN will advocate the establishment of a Bureau of Woods and Forests in connection with the Provincial Government. There is a store of useful and interesting matter in the first copy issued by Messrs. Toker & Co., and, judging from the success which has attended other publications with which these gentlemen have to do, we may safely predict success to the LUMBERMAN.—*Brampton Conservator.*

THE weather this month has been unfavorable for trade about Philadelphia, Pa., but there has been an activity of sales and inquiries very gratifying under the circumstances. All agree in predicting plenty of business in the near future for both city and country dealers. Prices are well maintained, and we do not think there will be any changes unless on seasoned lumber.

OUR TIMBER SUPPLY.

The *Monetary Times* says :—The question of the extent of the timber supply is relatively a more important one for Canada than for the States. What our remaining supply is, the means of estimating are much less accurate, and it would be well if in connection with the census of this year, special preparation had been made for getting reliable information on the subject. Alarmist stories are started, from time to time, that our timber supply is getting low ; bush fires doing more to denude our forests than the axe of the lumberman. One writer tells us with horror that in removing the forests which protect us from the bleak winds of the Arctic Ocean, we are in danger of letting in eternal winter upon us. Precisely where fact ends and imagination begins, there is no means of knowing. It is, however, about time that an effort should be made to find out the truth. But this is not sufficient. It is essential that every available means be used to put a stop to wanton waste by means of fire. A beginning has been made by the Ontario Government, but the effort is mere tentative and the extent of the means made use of is already known to be insufficient. The forest literature of European countries, respecting which but very little is known here, would furnish many useful hints as to the best means of forest preservation. The subject deserves at the hands of the local governments which are largely interested, more special attention than it has hitherto received.

SHIPPING NOTES.

FREIGHT RATES—INSURANCE—SAILORS' YARNS—NOTES FROM VARIOUS POINTS.

There is no movement yet among vessel men in Toronto harbor in the way of making engagements. It is a certainty that shippers have offered $1.25 per 1,000 on lumber from here to Oswego, but we have not heard of any vessel men having accepted a charter at that rate. On the contrary, they are asking 1.50. Both parties are lying off easily so far, as there is no hurry yet for two weeks or more. About grain rates there is an uncertainty. Shippers say they have been figuring and find that railway rates will leave them about even if they should pay the vessels 2c. from here to Kingston. This will be no better than the rate last year. Nothing can be done with vessel men on such a basis as that with lumber offering at $1.25. Rates on Lake Michigan ports have not been settled exactly, but charters have been made which will give some idea of what may yet be. A prominent shipper in Chicago has determined not to pay more than 6c. on corn to Buffalo, but some agents say they will get 7c., and some vessel men are holding off for 8c. One schooner has been chartered at Milwaukee with corn to Buffalo at 7½c., and another with wheat at 8c. Grain rates from Lake Michigan are expected to be higher than they were last year, but that circumstance will scarcely affect the rates out of Toronto harbor.

INSURANCE.

There is nothing doing of any consequence up to the present. The underwriters will not get fairly into business till the new book is out, or before April. All opinions point to the probability that rates will be higher this spring ; at least that they will open higher. Negotiations are said to have brought out the views that premiums may be in cases one-half to one per cent. higher than they were last year at the opening of navigation. There is no certainty that rates will be sustained at a higher figure, for it is pretty certain that insurance companies will be found outside of any pool combination who will offer better terms.

SAILORS' TALK.

There are no sailors in yet, but vessel captains are gathering round their usual places of rendezvous and exchanging views. These views cover the range of subjects that come up at this season. When the harbor will be open; whether they shall all stand out for "better terms" from shippers ; what sailors' wages will be ; and a strong current of yarns about how they did in wild encounters with ice of fabulous thickness in many past spring times. It is pretty safe to say that the ice in Toronto harbor will not be out of the way much before the first of April, and it will not cause any repining among vessel men if it should be so. The captains all feel pretty sure about getting good paying rates on lumber, and there are said to be plenty of freights just as soon as the vessels can move, so the vessel men are waiting their time with patient assurance. The rating of their vessels in the underwriters' book for 1881 will be looked for with interest by many who do not feel quite sure about the inspector's report. There is not much said yet about the sailors' wages, and it is not yet hinted what the demand will be. There was a good deal of grumbling last year about the rate paid to men before the mast, which was as much towards the close of the season as what was paid to the masters of vessels.

CANADIAN VESSELS AND AMERICAN FREIGHTS.

The Chicago *Tribune* has some observations on the operation of Clause 30 in the Washington Treaty relating to the carrying of American freights in Canadian bottoms. After reciting the regulation that Canadian vessels may carry freight from one American port destined to another American port, provided that a portion of such transit is overland in Canada and in bond, similar regulations being applicable to American vessels with British freights, the *Tribune* says that this agreement is fair [illegible] but the Canadian vessels get a large advantage from its operation, and gives the following figures in demonstration, showing the shipments in transit through Canada to American ports :

Articles.	*Collingwood.*	*Goderich.*	*Port Colborne.*	*Sarnia.*
Wheat, bush	75,385	[illegible]	[illegible]	[illegible]
Corn, bush	1,722,964	[illegible]	[illegible]	[illegible]
Flour, brls	4,582	[illegible]	[illegible]	[illegible]
Cornmeal, brls	3,100	[illegible]	[illegible]	[illegible]
Oatmeal, brls	385	[illegible]	[illegible]	[illegible]
Grass-seed, bags	5,210	[illegible]	[illegible]	[illegible]
Flax-seed, bags	847	[illegible]	[illegible]	[illegible]
Pork, brls	740	[illegible]	[illegible]	[illegible]

Of this quantity American vessels carried 581,898 bushels of corn and 28,285 bushels of wheat, the Canadian vessels getting the other share. So Canadian vessels get over three-fourths of the entire eastern bound freight, which passes overland in Canada during its transit.—*Globe.*

THE new lock and canal at the Sault Ste. Marie will be ready for use about July 1, 1881, with a depth of water at the present stage of sixteen feet. The river has been dredged to sixteen feet for forty miles southward from its head. Now that the final appropriation—$150,000—for the completion of these improvements has been made by Congress, our shipping will have the use of the increased depth of water—sixteen feet—throughout the entire channel between Lake Superior and Lake Huron, in 1881, excepting at two points—Lake George and the East Neebish rapids. The work in Lake George is under contract for completion in 1882. The improvement of the channel at the East Neebish rapids has been in the hands of the Government of the Dominion of Canada.

STEAMBOAT masters, mates, and engineers in the United States pay $10 every spring for their certificates. There is a sum of $300,000 to the credit of the Steamboat Inspection Service now, but fees are kept up.

THE schooner *Wanderer*, lying at Toronto, has been sold to Captain John Spence, of Saugeen, for $3,000. She will go into small timber trade on Lake Huron.

British Timber Trade.

Considering the spring trade indications, the London *Timber Trades Journal* says :

With regard to the timber trade, which has been a principal sufferer, it is not that we have had an unusually long winter—on the contrary, we had very fine weather in December—but when winter really did come in January, it came so much in earnest that for nearly a whole fortnight it almost entirely shut up the timber trade and brought it to a standstill, from which it only rallied at intervals till last week, when it seemed to resume its normal course and return to its ancient habits. This interruption to the trade was not limited to any locality ; it pervaded the whole kingdom, but it was chiefly exceptional in the south, where we are unused to such heavy snowfalls and to such biting frosts as we had to contend with during all the latter part of January, and the timber trade suffered in proportion, insomuch that our reports from the provinces were all of one kind for awhile. The state of trade was everywhere torpid, and was easily summed up as no trade at all anywhere.

OUR QUEBEC LETTER.

A QUIET SEASON—STOCKS WINTERING IN QUEBEC—THE MONTMORENCI MILLS—THE PROPOSED SHIPMENT OF LUMBER BY RAIL—THE NEW TIMBER DUES OF QUEBEC—CONFERENCE BETWEEN THE LUMBERMEN AND THE GOVERNMENT.

QUEBEC, March 25th, 1881.

In lumbermen's offices in this city, the present is the quietest season of the year. The accounts of last year's operations and shipments, and of stocks on hand are for the most part completed before the end of January. Contracts for next season's delivery have mostly been made weeks ago, and the chartering of vessels has hardly commenced. The stocks wintering here, as appears from the annual trade circulars of Messrs. J. Bell, Forsyth & Co., are unusually light, particularly those remaining in first hands.

The Montmorenci mills are working on full time night and day, the full yield for the season having been long ago disposed of. The figure paid for the season's cut of pine deals by Messrs. Bryant, Powis & Bryant, of London, has not yet transpired. It is believed in usually well informed circles to fully sustain recent quotations. The firm in question are opening an office in this city, and will certainly load twenty to thirty vessels here during the coming summer.

The shipment of lumber from Ottawa to Quebec, by rail instead of by water, has for some weeks past been engaging public attention here. The question has been opened by the recent connection made between the Canada Central, and Quebec, Montreal, Ottawa and Occidental Railways, and by the facilities offered in this port, where the terminus of the Q.M.O. & O. R. has been extended to deep water. The only difficulty in the scheme appears to be in connection with the rates of freight charged upon these two lines of railway. Lumber has been actually brought for over 200 miles over the Canada Central and its connections to Hull, but it has not been found possible after paying the freight thereon, to go to the expense of shipping it by Q.M.O. & O. R. to this city. The Local Government of Quebec and the management of the Provincial line have attempted patriotically enough to overcome the difficulty, by offering exceptionally low rates for the development of this trade, amounting to something like $17 to $20 per car from Hull to Quebec, a distance of 280 miles. Those interested in this proposed route are not without reasonable hopes that an arrangement will be made between the Provincial or Q.M.O. & O. Railway and the Canada Central, which will allow of the shipment of lumber by rail direct to deep water at Quebec, and avoid the danger and delay of rafting.

The most important event in connection with the lumber industry which has occurred here for a long time past, is the conference had here yesterday between the members of the Local Government and a deputation of lumbermen, concerning the new table of Crown timber dues imposed by the Order-in-Council of November last. It will afford a better understanding to readers outside of Quebec, to explain that prior to the passing of this Order, the dues imposed were ten cents upon logs of 16 inches diameter and under, and fifteen cents upon those of 17 inches and upwards. These dues have been increased to twelve instead of ten cents, and twenty-six cents in the latter case instead of fifteen. Now, the lumbermen complain with reason, not only that the rates, since the new imposition, are exorbitantly high and more than they can afford to pay, especially after so many seasons of depression in the trade, but also that the system of levying the dues is manifestly unfair, and operates to the disadvantage of those getting out a small class of logs. The lumbermen ask therefore, not only that there should be a reduction in the dues, which, by the new Order-in-Council, have been increased from 50 to 75 per cent, but also that the method of levying them should be assimilated to that which obtains in Ontario, where, instead of levying upon the dimensions of the log, a standard of the board measure contained in it is adopted, based upon the tables in Scribner's Doyle. These demands of the trade, decided upon some weeks ago at a convention of lumbermen held in Ottawa, were embodied in a petition to the Provincial Government of Quebec, and an interview was arranged which took place in Montreal. The Commissioner of Crown Lands, Hon. E. J. Flynn, was prevented by illness from participating in this meeting, and consequently a second convention was arranged, through the exertions of Hon. L. Ruggles Church, and took place in this city yesterday. All the Ministers of the Local Government were present, and the following lumbermen: Messrs. James McLaren, E. H. Bronson, J. A. Cameron, J. R. Booth, and W. G. Perley, of Ottawa; and Messrs. Robert Hamilton, Andrew Thompson, and McNaughton, of Quebec. The grievances of the trade, as already exposed, were fully explained, and the demands of the lumbermen were urged upon the Government. It was shown that the dues imposed in Quebec amounted to something like $1.22 per 1,000 feet if imposed as in Ontario by Doyle's Scribner upon the board measure contents of logs, while the dues in Ontario are but 75 cents per 1,000. By way of a compromise, it was stated that the majority of those in the trade, recognizing the necessity of the Provincial finances, would be willing to pay equivalent to $1.00 per 1,000. After a lengthy and pleasant conference, the Hon. Commissioner of Crown Lands informed the deputation that he hoped to be able before long to promise the lumbermen some slight concessions and probably a diminution in the tariff. It was also possible, he said, that next year there might be a change in the system of collection. This, however, could not be attempted during the present season, owing to other instructions having been sent to agents and bush-rangers. The members of the deputation left for home the same evening.

STADACONA.

Board of Trade Returns.

Showing receipts of wood imports into the United Kingdom for the last three years:—

TIMBER, HEWN.

	1878.	*1879.*	*1880.*
Russia	322,219	174,898	336,649
Sweden and Norway	468,096	436,653	658,881
Germany	216,158	200,911	277,579
British North America	260,890	196,431	360,622
Other Countries	413,442	369,322	486,143
	1,680,805	1,378,215	2,119,874

TIMBER, SAWN OR SPLIT, PLANED OR DRESSED.

Russia	914,807	723,609	1,060,608
Sweden and Norway	1,453,477	1,406,730	1,608,201
British North America	963,171	904,559	1,147,040
Other Countries	287,641	218,414	271,055
	3,619,096	3,253,312	4,086,904

As it may be of interest to timber operators to know the points in the United Kingdom which received the bulk of the imports of hewn timber, we annex the following statement:—

IMPORTS.

	1880.
Cardiff	216,226
Greenock	90,363
Hartlepool	168,866
Hull	80,329
Liverpool	128,336
London	241,424
Newport	125,711
Sunderland	122,855
Tyne	112,978

All the above in loads of 50 cubic feet.

Value of Sawdust.

We should hardly credit so large a story from a less reliable source than the *N. W. Lumberman*, but we presume the editor has the statistics, at hand to confirm his assertions:—

"In New York there are about 500 venders of sawdust, having a capital of $200,000 invested, and doing a business amounting to more than $2,000,000 annually. Forty years ago the mills were glad to have sawdust carted away; twenty-five years ago it could be bought for fifty cents a load, but the price has increased, and now it brings $3.50 a load at the mills. It is used at the hotels, eating houses, groceries, and other business places. It is wet and spread over floors in order to make the sweeping cleaner work. Plumbers use a great deal about pipes and buildings to deaden walls and floors. Soda water men and packers of glass and small articles of every kind use it, and dolls and some living creatures are more or less stuffed with it. Yellow pine makes the best sawdust, as it is the least dusty, and has a pungent, healthy smell. But any white wood dust will do. Black walnut sawdust will not sell and is burned."

THERE are 215 penitentiary convicts employed in logging camps in Texas.

THE VANISHING FORESTS.

The New York *Shipping List* says: The American people boast of their quickness to profit by the logic of events but in respect to many things in the line of general duty to society, they are as slow to learn as was the ancient Egypt, who resisted a number of very convincing arguments with which the Lord had intrusted Moses. There can be no doubt, in light of events, that the greed of man, and not the unkindness of nature, must be held responsible for the increasing frequency of droughts in this country. By such an extensive denudation of forest lands is now being practiced, we are seriously disarranging Nature's economy and interfering with the conditions that are essential to her healty processes. It is a generally understood fact, upon which scientific men have now no monopoly, that the increase of draught is, in the long run, in direct ratio to the destruction of the forests and general tree supply. A statistician, who claims to have made accurate calculation, declares that the pine forests of Michigan will be exhausted in thirteen years, and those of Wisconsin and Minnesota in thirty and forty years. There is little reason to doubt the approximate accuracy of the estimate. Twenty years ago this region had scarcely been touched by the axe. The disappearance of forests will make the economy of wood a matter of duty, could a generation habitually thoughtless of its descendants be influenced by such a remote evil. We are a little too much inclined to guard the claims of our descendants as did the miserly humorist, who, when asked to do something which conduced to the good of after ages, asked why he should be called upon to do anything for posterity since posterity had never done anything for him. Wood must always enter more or less into building enterprises. If for no other purpose, our forests should be spared from wanton destruction. If we can economize them by using the more substantial building materials with which nature has so lavishly supplied us, and at the same time save moisture for the parched country, and add safety, beauty and durability to our cities and villages, it is certainly worth our while to make the effort.

Blowing off Boilers.

A French scientific journal gives some useful hints in regard to emptying and blowing off steam boilers. It is injurious to empty a boiler soon after stopping it, because, in the case of an externally fired boiler, the masonry in which it is placed being at a higher temperature than the boiler it envelops, imparts to it some of its heat, which, in the absence of the water, may do it some harm. It is well to admit a current of air through the flues some hours after stopping the generator, and not to empty it before the flues become cooled to a temperature below 300°. When the flues are not too hot, no serious inconvenience is experienced in emptying the boiler under pressure. We do not say at high pressure, as for a boiler, the pressure of which would be 10 pounds, the temperature of the water being 304°, a great quantity of steam would be generated during the process of emptying; we think at a pressure of two pounds the boiler could be emptied without danger or inconvenience. We have sometimes seen owners empty their boilers almost immediately after the fires had been extinguished, clean them with cold water as soon as they were empty, and keep up a current of water so that the workmen might work there. Boilers of small dimensions sometimes resist such treatment, but in large boilers it will be seen that unequal contractions must take place, causing the rivets to burst.

Accurate Statistics, &c.

THE CANADA LUMBERMAN.—This is the title of a paper published in Peterborough, by Toker & Co., devoted to the interests of the Lumber and Timber Industries of the Dominion. THE CANADA LUMBERMAN will be purely a trade organ, and will be absolutely non-political. It will contain those accurate statistics which are necessary to the trade as a basis for intelligent operations. All information of value to the trade at large will be diligently collected and matters of interest to them will be discussed and advocated. Subscription $2 per annum, published semi-monthly.—*Brantford Courier.*

APPREHENSIONS OF NORTH-WESTERN LUMBERMEN.

The *Mississippi Valley Lumberman and Manufacturer* has the following concerning the logging situation on the Upper Mississippi streams:—

"The gravity of the situation comes not so much from the fact that there is too much snow for logging purposes as from the danger of a sudden thaw, which would certainly create the most disastrous floods ever known on the continent. This danger is so imminent that all stand in fear at the probable events of the next sixty days, which will almost certainly ruin scores if not hundreds of lumbermen. There is now more than double as much water on the 150,000 square miles drained by the waters of the Upper Mississippi as there has been since its first settlement at any one time. Last year the floods did more than a million and a half of dollars' damage to the lumbermen of this valley, but from the situation now the losses of 1881 will render the damage of last year insignificant. Those who have logs secure in lakes and small streams will do well to keep them there as long as possible."

FOREST FIRES.

We find the following editorial in the Montreal *Witness*:—

The loss caused by forest fires may be partially seen by a statement made by Mr. Mackay, the great Ottawa lumber merchant, that in four townships between the Mississippi and Madawaska rivers, which fifteen years ago were one of the finest pine countries ever known, the pine has almost all been destroyed by forest fires, started by malicious vagabonds. A series of interesting articles on forestry, by a special correspondent, appeared in the *Witness* a couple of years ago, in which it was made very plain that if remedial legislation were not had and a stern example made of the "malicious vagabonds" and others who, though not malicious, have no sense of responsibility when making fires in the bush, our magnificent forests would in a few years be a thing of the past. Every patriotic man should consider himself personally a custodian of these immense sources of wealth to the country, and do what is in his power by example, rebuke, advice, and, where necessary, "legal persuasion," to make people, especially wandering vagabonds, understand their value.

Port Hope Freight Rates.

A meeting of the vessel-owners of Port Hope was held at the office of Mr. R. C. Smith, jr., to take into consideration the rates of freights from this port. Mr. R. C. Smith, jr., was in the chair. After a general discussion and careful calculation of the expenses of vessels, at the lowest rates, the following rates of freight were adopted, and the owners pledged themselves to carry them out in good faith. The resolutions are based with equal fairness to owners and shippers:—From Port Hope to Oswego, and other American ports on Lake Ontario, lumber, $1.20 per 1,000 ft.; shingles, 20c. per 1,000; lath, pickets, &c., at a proportionate rate; grain 2½c. a bushel (Oswego to Kingston); coal, 40c. per ton (free in and out Oswego to Port Hope); hay, $2 per ton (on and off rail, with deck load); on all other articles of freight, the rates to be regulated by the expenses incurred for the trip and the foregoing freights.—*Times.*

Toronto Freight Rates.

The ice still remains firm in the bay, although the recent fine weather has so honeycombed it in places that crossing it is now considered dangerous. Special telegrams from various ports tend to show a similar state of affairs existing over the lakes, and point to a late opening. At this point preparations are being actively made for the opening of navigation, and both vessels and docks are being thoroughly overhauled and repaired. Rates promise to open higher than last spring, and charters have already been made at $1.25 per thousand on lumber to Oswego.

THE difficulty experienced, in filling orders in the Chicago market, on account of broken stocks is on the increase in the American markets, and it is said that on this account in some markets the lumber being handled is not far removed from green.

Trade Notes.

Canadian.

RAILWAY ties and cedar posts are being shipped in great quantities from Kemptville to the United States.

MEDONTE.—Twenty-nine years ago Mr. Geo. Wright planted a spruce about six inches in circumference. Last season, it measured five feet nine inches in circumference.

THE Halifax *New Era* says: Of inward freight we note 41 cars deals and timber for the loading ships at the depot, and 213 cars coal. Three large ships of from 600 to 1,000 tons each, are at present loading deals and timber at our railway depot.

THE Collingwood *Messenger* says: From Byng Inlet we learn that lumbering operations are over for the season, all the logs required being in. It has been a very favorable winter for lumbering purposes, and there are more logs cut for Byng Inlet mills than in anv past year.

THE value of buildings already projected in Toronto, exclusive of the Parliament buildings and Court House reaches to nearly half a million dollars. On the whole the outlook for building operations in Toronto during the present season, and therefore for the local demand for lumber, is brighter than in any preceding year.

TWENTY-FIVE cars of lumber are being shipped at Ottawa city daily, by the St. Lawrence & Ottawa Railway, to the United States. Last week Bronson & Weston shipped ten car loads of timber by the Canada Central Railway to New York. Col. Robbins also shipped ten car loads of iron ore to the same place.

A RAFT of wood belonging to Mr. Alexander Russell, of Levis, went adrift the other day opposite Beaumont, with three men on board, who were several hours afloat and suffered very severely from the cold. Mr. Russell sent the steamer *Prince Edward* to their assistance, but it failed to find them owing to the darkness of the night; meantime they managed to land at Beaumont.

A COMPARATIVELY new industry is the getting out of hop-poles for the American market. For this purpose small cedar is greatly in demand, owing to its lasting character. Large quantities have been shipped from the stations of the St. Lawrence and Ottawa Railway, and other local lines. Within four weeks from fifty to sixty car loads have been shipped from Buckingham station alone.

A GENTLEMAN just arrived from the Upper Ottawa states that at Fort Eddy, which is 117 miles from Pembroke and 236 from Ottawa, there is plenty of snow for good sleighing. The cut of logs in that region has been in excess of any previous year. It is thought that owing to the large quantity of snow there will be no difficulty in floating out the timber and logs. Shantymen and teams are on their way down the river in large numbers.

ORILLIA.—Last week, Mr. Wm. Ramsay, of the Orillia Carriage Works, shipped to Emerson and Winnipeg, by the Midland railway *via* Whitby, one hundred and ten vehicles—waggons, buggies, and buckboards, all manufactured since the 1st day of February. Mr. Ramsay expects to follow up this shipment with another equally as large in the course of a few weeks. He has about forty men employed, and has enough orders ahead to keep them hard at work for some time.

WASHAGO.—A correspondent writes: Sawlogging has been a boom in this part of the country, the weather and roads being all that could be desired. Thompson, Smith & Sons, of Bradford, and Andrew Tait, of Orillia, have a large quantity of logs on this end of Lake Couchiching. Mr. A. Marshall and others are getting out considerable, and the three shingle mills are running steadily. Messrs. Tobey & Co., of Collingwood, are doing a large business in tanbark; the station yard is nearly filled with it.

FOLLOWING the example of Ontario, an effort is being made in Quebec to interest British capital in the lumbering interests of that Province. Mr. H. Atkinson, of Messrs. H. Atkinson & Co., is at present in Britain forming a joint stock company to work limits in which his firm and La Banque Nationale are interested. He has met with good encouragement and it is reported that upon the strength of his favorable reports, supplies are being sent into the bush so as to be ready for an early start next fall. Messrs. Girouard & Beaudet, who have extensive limits in the Saguenay district, and a fine steam mill at Betsiamis, will also likely put their business into the shape of a joint stock company, and Mr. Girouard is at present in England negotiating to this end.

American.

ONE hundred and fifteen ship builders from Scotland arrived, recently, to work in the ship yards of Detroit, Mich.

IN Boston, the stock of hardwoods has been somewhat enlarged by late arrivals, but prices are firm and unchanged.

PARCHMENT made from the palmetto of Florida is likely to come into quite general use for conveyances, land office receipts, etc.

ONE of the institutions of Beaumont, Texas, is a cistern-factory. The cisterns are made of cypress, and shipped in pieces, to various parts of the state.

IN New York, extreme rates are obtained for everything desirable. Seasoned oak and ash are scarce, and, owing to the limited supply of walnut, the extra demand for mahogany continues.

A CLEVELAND, Ohio, paper says that the present season promises to tax the vessel capacity on the lakes to the utmost and that a marked advance in the freight rates may be looked for.

HENRY & BALDWIN, of Wells River, Vt., have sold their Granby mill land of 13,000 acres, to T. G. Beattie, of Brunswick, and A. M. Beattie, of Lancaster, for $4 per acre. The late owners bought the land, in 1871, for something less than $1 per acre.

THERE are no changes to note in Detroit prices; in fact, the question of price is not put first. Now, the first inquiry is, Can you furnish the bill? Next, Can you deliver at once? If the dealer can furnish and deliver at once he can make a price to suit himself, particularly on dry stock and large or long dimension stuff.

THE Saginaw lumber market has developed no noteworthy changes. Appearances begin to indicate the approach of spring, and some buyers from eastern points have arrived to look over the market. I have heard of no sales, and, so far as learned, no desirable lumber is offering; in fact, that class of stock is not on the market. Prices are steady and firm, with prospects of a very active season.

HON. ALEX. STEWART furnishes the Wausau *Wisconsin* with figures on the season's log crop on the Wisconsin and its tributaries as follows: Upper Wisconsin, 52,750,000; Somo river, 9,600,000; Tomahawk river, 5,500,000; Willow river, 5,900,000; Spirit river, 6,600,000; Devil creek, 1,100,000; Copper river, 3,100,000; New Wood creek, 8,500,000; Prairie river, 10,000,000; Trapp river, 5,700,000; Pine river, 16,700,000. Total, 124,475,000 feet.

AT Milwaukee trade has been very near at a stand still, owing to the big snow storm, as no lumber can be shipped at present on account of our railroad companies refusing to let dealers have cars before they have got their road cleaned from snow so they can again move freight. If this snow storm had not set in they would now be enjoying a good trade. Stocks are getting badly broken on joist, scantling and timber; we also hear of a number of dealers being short on 16-foot fencing.

AN establishment has recently been started near Mobile, Ala., for the manufacture of furniture from gum. The enterprise will be watched with much interest, and should it prove successful, others are sure to spring up in various parts of the country, as it will be a solution to one of the vexed problems of the day. Since walnut has become so scarce and high, furniture manufacturers have been anxiously hunting for something to supersede it, and if it be found in gum it will be a wood at once cheap and abundant.

THE large tract of pine timber land on the upper waters of the Pere Marquette river in Lake and Newaygo counties, Michigan, known as the Waters tract, changed hands recently. It was owned by H. D. Waters, and contains 4,000 acres, from which it is estimated that from 50,000,000 to 100,000,000 feet of pine will be cut. The purchasers are Messrs. Thompson & Patterson, of New York, and Messrs. Walkup, Fisher & Co., of Chicago, who intend making arrangements with some party to build a mill near Crooked Lake, for the purpose of turning the timber into lumber and putting it on the market.

THE cedar tie trade at Cheboygan this season promises to be the most profitable one for several seasons past. One of the most extensive dealers says he is constantly in receipt of letters making inquiries as to whether they can be had in that section. These inquiries come from all sections of the country and show that railroad matters are booming. Several hundred thousand ties are being got out in that vicinity and the indications are that sale could be had for as many more. The most of those being got out are already contracted for.

THE contracts made by Chicago dealers for maple aggregate millions of feet. The demand for maple flooring has not been met for some time past, but there is no probability that it will be scarce for some time to come, although the dry kiln will be for a while called into use. That the sales of this kind of flooring for the present year will exceed those of any two years past, there is no doubt. At the same price many prefer it to ash, and the high price of the latter will cause it to be looked upon with still less favor.

A GENTLEMAN, who has recently been travelling through the lumber regions of Georgia and Florida, writes to the *Lumberman* that he never saw so many vessels on demurrage at the principal shipping points before. They are prevented from loading through the inability of the mills to supply them with cargoes, the long continued rains having made it impossible for the manufacturers to get the logs to saw. In many cases, the mules work in water up to their haunches hauling logs, and after they are hauled, many of the streams are so full it is dangerous to raft them.

THE stave market is pretty well cleaned out. The dealers in Michigan are receiving orders from Iowa, Wisconsin and Minnesota, that they are not able to fill. They attribute the scarcity, partly, to the snow blockade that has kept them back; but, from what we learn, it is safe to say that the stave cut in Indiana has been light this winter. A firm in Minneapolis that heretofore would not use an elm stave has just ordered 100,000 from a dealer here, and other firms are necessarily looking in the same direction. Hoops are in moderate supply and without change in prices, except flat, No. 1, which are selling higher.

THE Diamond Match Company is the name of a corporation recently formed in New Haven, Conn., which, if all reports concerning it be true, starts out with the intention of becoming one of the greatest monopolies in the country. According to the statements made regarding it, it has a capital of $2,250,000, something over one-half of which represents property already purchased, consisting of 23 match factories in different places. It is said to be the purpose of the company to buy up all the factories it can get and convert the business of making matches into a monopoly. To this end it proposes to limit the production and regulate prices.

A BEAUMONT, Texas, paper says that the demand for lumber at the present time is unprecedented in the history of Texas. The only thing which now prevents the mill men from realizing immense profits is the lack of cars to carry their lumber. This defect is being remedied in a measure; but there is another matter of intense interest to them and to that place. The long continued rain has made the hauling of timber impossible, and the consequence is that the supply of logs on hand is short in comparison, both to the cutting capacity of the mills and the demand for lumber, and the lumbermen hope that they will soon be able to ship their stuff promptly.

FROM Cadillac, Mich., it is reported that the bill stuff trade there is beyond all precedent. Prices for same are at least $1 higher, and orders hard to place. Dry stock is very much diminished and nearly all desirable grades are out of first hands. Stocks are badly broken. Buyers are plenty. Some manufacturers are shipping stock barely half dry and putting a price upon it to cover added freight. Prices are, of course, very firm. Opinions differ as to the future. Some dealers are rushing off their stock at quoted prices, as fast as they can get c[illegible] anticipation of a drop as soon as the dry stock along shore can be reached by water. No one expects a further advance, unless temporarily. There are 33 per cent. more logs in hereabouts than at the same date last [illegible]

THE cut of hardwoods this season, it is said, will be the largest in the history of the business. Everybody that can get at a log will cut it. To this rule we know of but one exception. Some of the Michigan men are l[illegible] their maple in reserve, entertaining the opinion that, on general principles in the lumber business, rarely comes to the surface, that a few years hence there may possibly be a call for maple flooring. How wise a move it is, a few years will tell. An extensive pine operator in Michigan recently said to the writer, that although his business was a good one so far as profits are concerned, if he were to sell his mill property and put the money into standing hardwoods, he would expect at the end of a few years to be the winner.

THE *Northwestern Lumberman*, under date of March 16th, says: Anyone in pursuit of information regarding the state of the lumber business throughout the country, and desirous of finding it in a flourishing condition, will not be seriously disappointed in reading the reports from the various distributing points. They uniformly speak of trade as good; in some cases it is characterized as remarkable, considering the season of the year and the fact that the atmospheric conditions are, and have been, so unfavorable for the sale of lumber. The present demand regarding it as a whole, is excellent. Orders are plenty, and inquiries, which afford an even better index of the feeling among the retailers, are received in such numbers that owners of lumber yards are beginning to talk enthusiasticaly of the business that is likely to be transacted this spring. The indications certainly point to a very large spring trade, and most operators are satisfied that the first of it is already reaching the points of distribution. The general report is that almost any quantity of new buildings have been projected, and their erection will be begun as soon as the season is far enough advanced. The expectation on every hand is that the business of this season will largely exceed that of last year, or any year, in fact. The *Lumberman* does not recall a time in the entire history of the trade when the confidence in the future was so great, or when the dealers, at this time in the spring, manifested such a degree of satisfaction with the business doing. There seems to be no question, anywhere, but that we are entering upon a season that will go down in the annals of the lumber trade as one of the most active and prosperous for lumbermen ever known.

IRWIN & BOYD

Commission Lumber Dealers,

FORWARDERS,

Shipping and General Agents

PORT HOPE.

White Oak and Ash

LUMBER WANTED.

ADDRESS

YATES AND STRATFORD,

BRANTFORD.

b 15

NOTICE.

The undersigned having transferred the CANADA LUMBERMAN to Messrs. Toker & Co., Peterborough, it will in future be published by them. The facilities possessed by this extensive and old established house, and the high reputation of the publishers, should be a guarantee that the LUMBERMAN will command a prominent position amongst the leading journals of the day. Those who should patronize it are a wealthy and influential class. The field is ample, and as the undersigned made the transfer above referred to with a view of improving the LUMBERMAN, he feels assured that it only requires the combined support of those in whose interest it is published to ensure it that success which was anticipated when he first established it.

All sums due for subscriptions must be paid to TOKER & Co., or their duly authorized agent.

ALEXANDER BEGG.

February 24, 1881.

The Canada Lumberman

DEVOTED TO THE LUMBER AND TIMBER INTERESTS OF THE DOMINION.

PUBLISHED SEMI-MONTHLY BY

TOKER & Co. PETERBOROUGH.

Terms of Subscription:

One copy, one year, in advance	$2 00
One copy, six months, in advance	1 00

Advertising Rates:

Per line, for one year	$0 90
Per line, for six months	50
Per line, for three months	30
Per line, for first insertion	10
Per line, for each subsequent insertion to 3 mo's.	05
Cards not occupying more than 12 lines (1 inch) per annum	8 00
Cards not occupying more than 12 lines (1 inch) for six months	5 00
Cards not occupying more than 6 lines per annum	5 00
Cards not occupying more than 6 lines, for 6 mo's	3 00

Special rates will be made for page, half page and column advertisements.

Advertisements intended for insertion in any particular issue should reach the office of publication at least three clear days before the day of publication, to insure insertion.

All communications, orders and remittances should be addressed and made payable to TOKER & Co., Peterborough, Ont.

Communications intended for insertion in the CANADA LUMBERMAN, must be accompanied by the name of the writer, not necessarily for publication, but as a guarantee of good faith. Communications to insure insertion (if accepted) in the following number, should be in the hands of the publishers a week before the date of the next issue.

Travelling Agent.

MR. A. L. W. BEGG has been appointed agent for the CANADA LUMBERMAN, and is authorized to collect subscriptions and grant receipts therefor and to make contracts for advertisements appearing in its columns.

PETERBOROUGH, Ont. APRIL 1, 1881

OUR WOODS AND FORESTS.

In our introductory editorial of the first number of this paper issued from this office, we briefly sketched out the policy in regard to the conservation and management of our forests, which we proposed to advocate. We asserted that the responsibilities attached to this subject should be dealt with by a separate department of the Local Government, which might very properly be called the Bureau of Woods and Forests.

In comparatively new countries such as ours, there is a disposition on the part of the general public to over estimate the areas of timber lands and the quantity of the industrial woods upon them. This arises no doubt from the fact that so long as the required Government revenue is derived from this source, the diminution of forest areas by manufacture, by fires and by other destructive causes excites little attention. If there is any useful lesson to be learned from experience why should we not look for the causes which have denuded European and other countries of their timber—investigate their manner of dealing with the question—and adopt the best methods which modern intelligence has brought to bear on the subject? It should be kept in mind that the prosperity of this country is, in a great measure, dependant upon the existence and the activity of the lumber trade—a trade that in this Dominion of ours gives employment directly, it is estimated, to 100,000 men and 20,000 horses, not to speak of the indirect employment it gives to manufacturers of woollen goods, boots and shoes, and other clothing, to axe factories, foundries and saw manufactories, to railroads and their employees, to vessels with their crews, and to a host of others too numerous to particularize. It is none too soon to call public attention prominently to this, and to have investigations made to ascertain how long the forest resources of the country will stand the present drain upon them It is none too soon to enquire what industry can be established to take the place of this leading factor in Canada's present prosperity, when it is exhausted.

So far we have only alluded to the immediate effect of losing this industry from the want of the raw material, and the most sanguine do not pretend that the period of exhaustion will be extended beyond twenty years. But we propose to look somewhat further and to ask if the study and promotion of arboriculture under Government auspices is not necessary to protect and foster even the agricultural interests of the country. The climatic influences of well distributed forests are only now being understood and appreciated. The effect they have in influencing the humidity of the air and soil—in mitigating the extremes of heat and cold—in preserving the equitable flow of streams—in retarding too sudden evaporation—in the hygienic influence upon the population—are not these matters which should command the attention of our legislators? We shall endeavor to call public attention to the subject by showing what progress other countries have made and the means they have adopted to repress and replace the ravages of the ruthless axe-man and the deadly incendiary.

THE PRODUCTS OF THE FOREST.

One of the eight schedules prepared for use in the taking of the census of the current year is devoted entirely to obtaining a return of the products of the forest for the twelve months ending the 4th instant, divided under the following seventeen headings, viz.:—

1. Number of cubic feet of square white pine.
2. Number of cubic feet of square red pine.
3. Number of cubic feet of square oak.
4. Number of cubic feet of square or sided tamarac.
5. Number of cubic feet of square birch and maple.
6. Number of cubic feet of square elm.
7. Number of cubic feet of black walnut.
8. Number of cubic feet of other species of walnut.
9. Number of cubic feet of hickory.
10. Number of cubic feet of all other kinds of square or sided timber, including railway ties.
11. Number of *census standard of pine logs.
12. Number of census standard of spruce and other logs.
13. Number of spars and masts, including telegraph poles.
14. Number of thousands of staves.
15. Number of cords of lath-wood.
16. Number of cords of tanbark.
17. Number of cords of wood.

*The census standard is 100 feet.

If the enumerators discharge their duty properly and the "getters' out" of our forest products exercise a reasonable amount of forethought and care, in giving the information for which they are to be asked, much valuable information, will thus be obtained with regard to this most important product of our Dominion. We trust that those who can alone furnish the information asked, will deem it their interest as well as their duty to take sufficient trouble to give the facts as they really are and not as they may estimate them in a haphazard sort of fashion—a little forethought is all that is required to do so.

The circulation of the CANADA LUMBERMAN is over 2,000 copies. Advertisers should note this.

CAPITAL OR REVENUE.

The *Monetary Times* of March 4th, in an editorial on Provincial railways subsidies has the following paragraph:—

"A sensible thing to do would have been to separate receipts, which properly belong to capital, from those which properly belong to revenue; otherwise, when the last acre of Crown lands is sold and the proceeds spent, an important source of revenue will have been dried up. The Crown lands might reasonably have been treated as a source of capital, and the net proceeds derived from them, less perhaps what comes from timber, formed a fund intended to be productive when these lands all become private property. A reserve of this kind, intended to meet a deficiency now dimly foreshadowed in revenue, would have been an intelligable provision for the future. An accidental surplus accumulated to-day and liable to be dissipated to-morrow, is more purposeless and less certain of permanence."

While we fully agree in the propriety of treating the land receipts as capital, we maintain that the still more important receipts from our forests should also be looked upon as capital—not revenue. Our forests are being rapidly destroyed and this valuable public property being thus made away with, it is common sense to admit that our capital is by so much dininished. If such a system were adopted as obtains in older countries, by which the forests are perpetually maintained unimpaired, the yearly produce might then fairly be looked upon and treated as revenue.

BRITISH COLUMBIA—ITS TIMBER, &c.

That section of British Columbia west of the Cascades and including Vancouver and Queen Charlotte Islands, is, according to Professor Macoun, covered with, probably, one of the finest forests in the world. Chief amongst the trees is the Douglas Fir *(Abies Douglasii)*, which is the chief forest tree, and which is used throughout the country for building purposes, and for export in the form of deals and spars.

White Cedar *(Thuja gigantea)* is another giant, and in the Valley of the Fraser and up the coast attains to an immense size. The Indians use this wood altogether in the construction of their houses, and in building those large canoes which are the wonder of the eastern people.

The other trees are a species of Yew, another of Alder, two species of Fir *(Abies Menziesii* and *Grandis)*; two species of Pine *(Pinus contorta* and *monticola)*; two species of Maple *(Acer macrophyllum* and *circinatum)*; Hemlock Spruce *(Abies Mertensiana)* is a common tree on the mainland; while a species of Oak *(Quercus Gayrrana)* is abundant on the Island, but has not been detected on the continent. An evergreen tree *(Arbutus Menziesii)* is quite common along the coast of the Island, and, both summer and winter, its foliage contrasts finely with that of the sombre-hued Douglas Fir.

In the second, or arid district, a Pine *(Pinus ponderosa)* takes the place of the Douglas Fir of the coast, and is a very valuable tree, growing to a large size, with clean trunk, and resembling the red pine of Ontario very much. The tops of the lower mountains and the sides of the higher ones support a heavy growth of Douglas Fir, but it is far from being the beautiful tree of the coast.

The timber of the third region is not so good, and consists principally of Poplar and Black Pine *(Pinus contorta)* with occasional groves of Douglas Fir on the higher hills. Black and White Spruce with a little Balsam Fir make up the remainder.

The Island of Vancouver is about 300 miles in length with an average breadth of about 60, and probably contains 20,000 square miles. The soil is good, but the surface is so much broken by rock that it is altogether impossible to tell the amount of good arable land on the Island. There is no doubt the day will come when Vancouver will support a large population—partly agricultural, and partly engaged in mining, lumbering and fishing.

Burrard Inlet is situated on the Gulf of Georgia, a few miles from New Westminster. It is nine miles long—deep and safe. It is the port from which the lumber trade is chiefly carried on. It is very easy of access to vessels of any size or class, and convenient depth of water for anchorage may be found in almost every part of it.

Various species of raspberries, currants, gooseberries, and blueberries are found throughout the country. The Oregon grape *(Berberis aquifolium* and *nervosa)* extends all the way from Vancouver to latitude 55° in the interior, and to Alaska along the coast. Apples and pears of a very large size are produced in such abundance that the former can hardly be sold at any price.

LONGFORD.

On Monday, the 14th instant, Mr. William Thompson, eldest son of Mr. John Thompson, President and Manager of the Longford Lumber Company, was presented with a valuable gold chain and locket, from the employees of the Longford Mills, it being the anniversary of his twenty-first birthday. Mr. John Thompson was also at the same time presented with a tray and elegant silver tea-service and liquor stand, accompanied by the following address from employees in his mills and shanties. The address was read by Mr. Stewart, engineer:—

To John Thompson, Esq.,

We, the employees of the Longford Lumber Company, desire to congratulate you and Mrs. Thompson on your safe return from your native land, hoping you have enjoyed yourselves, viewing the scene of your younger days. No doubt many of them were very dear to you, and you have met some of your relations and friends, who have drawn around you pleasant memories of the past. We take this opportunity of tendering to you our respectful recognition of your many excellent qualities, which yo have shown in your dealings with us; your consideration of our faults, your ready sympathy in our troubles, and the special interest you take in our welfare, through a period extending from one to twelve years. We have felt like yourself many times, despondent at the financial depression prevailing through our country, in almost every occupation, but in your line of business particularly. But we are pleased that now a new era has dawned upon us and matters look more favorable, and we trust that during the coming years, you may have prosperity in every branch of your business, and we can assure you that anything we can do to make it more successful will be our delight. We wish to convey to you the esteem in which you and your family are held by us, and request you and Mrs. Thompson to accept this present as a token of our regard for you, hoping that an All Wise Providence will spare you both to enjoy many happy years together with your family.

Signed in behalf of the employees,

A. STEWART,
And 85 others

Mr. Maxwell Hall, accountant to the firm, on presenting the chain and locket to Mr. Wm. Thompson, read the following address:—

To Mr. Wm. Thompson:

DEAR SIR,—We, the employees of the Longford Lumber Company, felt as this is the aniversary of your twenty-first birthday, and having the very highest regard for you as the eldest son of our esteemed employer, would not allow this occasion to pass unnoticed. We therefore are delighted to congratulate you on arriving at you majority, the age at which one is supposed to leave the days of his boyhood, and reach forward and claim to be a man. The majority of young men on attaining manhood have very often to start out in the world with but small means, this, happily, is not your case, having at your command a large business in connection with your father, and having many of those sterling qualities, which compose the true man, and which we have all so much admired and respected in you. We can assure you that we hope you may long be spared to live a happy and useful life, and in your efforts to make your business a success you will have our warmest sympathies and assistance.

Signed in behalf of the employees,

MAXWELL HALL,
And 30 others.

The addresses were beautifully illuminated, and embellished with scenes associated with the life and butiness of a lumberman.

After the presentations, supper was partaken of in the spacious dining-room of the boarding-hourse in connection with the mills. The occasion was enjoyed by all present, and demonstrated the deep feelings of friendship and confidence existing between the employer and employed. Probably in but few business concerns in Canada, so large as this, does there exist the same degree of mutual good-will and cordiality as are to be found at Longford. After supper the dining-room was cleared and dancing kept up with great glee until a reasonably early hour in the morning.

THE average price paid for hemlock bark at Richmond, Que., is $6.25 per cord.

BOOMS AND BOOMAGE.

The Municipal Council of the County of Northumberland, New Brunswick, have passed a By-law, ordaining :—

1. That the Boom Master of Barnaby River Boom shall, on or before the 31st day of December in each and every year, render to a Committee of three persons appointed by the shareholders of said Boom, a detailed statement of all lumber that shall pass through the said Boom during the season, together with the amount of boomage collected thereon.

2. That the Boom Master shall be entitled to receive out of the amount collected, the sum of $1.00 per day for each day's actual attendance at said Boom, and the balance of the boomage collected shall be distributed by said Committee among the shareholders in proportion to the quantity of lumber each may have.

SLIDES AND BOOMS.

From the report of the Minister of Public Works for the year ending 30th January, 1880, under the heading "Slides and Booms" we have some instructive figures. The Government slides were constructed to effect the passage of timber, where impediments to navigation exist. Works have been constructed on the Saguenay, St. Maurice, Ottawa, and Trent Rivers and some of their tributaries. On the former stream they consist of one slide 5,840 feet in length, with a boom of 1,344 feet and dams, piers and bulkhead. The slide takes the timber past the rapids between Lake St. John and the River Saguenay. The works extend over a distance of 60 miles, and occupied four years in building, having been begun in 1856 and completed in 1860. The slides and booms on the River St, Maurice and the Vermilion, one of its tributaries, are met in the order following :—

Stations.	*Distance from Three Rivers.*
River St. Maurice :—	
Booms at mouth of river	0 miles.
Gres Falls	16 "
Shawenegan	23 "
Grand' Mere	29 "
Little Piles	31½ "
La Tuque	100 "
Plamondon Eddy	106 "
River Vermilion :—	
Mouth of River	116 "
Iroquois Falls	121 "

The principal tributaries of the River St. Maurice are the Shawenegan, Mackinak, Matawan, Petit Bostonais, Grand Bostonais, Croche, Vermilion, Tranche, Grand Pierriche and Manouan. The following works were executed during the fiscal year :—A new pier was built at the mouth of the river St. Maurice with the view of rendering the fastening of the boom more secure, and the working of the swinging boom easier. Old piers at this station were repaired and raised. At Gres Falls, a new wharf was built on the site of the one carried away by last year's freshet. The old booms were repaired and 800 feet of new ones constructed. The slide at Shawenegan was completely restored, the booms repaired and other improvements made at this station. A dam measuring 110 feet long and 7 feet high was constructed at Little Piles, but the water carried it away. $768.81 were expended during the year at La Tuque, towards widening by blasting the channel of the river at the head of the falls. The Government Works for the descent of timber in the Ottawa district, include 11 stations on the Ottawa Main River, 1 on the Gatineau, 15 on the Madawaska, 2 on the Coulonge, 1 on the Black, 24 on the Petewawa, and 12 on the Du Moine. On most of these, more or less work was, of an improving nature, done during the year. The booms, piers and slides and all such portions of the works as are connected with the lumbering operations on the River Trent at Chisholm's Rapids, Ranney's Falls, Middle Falls, Heeley's Falls and Crook's Rapids, were transferred to a company formed purposely for the management and maintenance of those works, with the right of levying tolls thereon, at the rate of five shillings per crib, at each of the slides, except at Chisholm's and Crook's Rapids, where the works constructed do not facilitate the descent of timber. This rate was altered by an Order in Council, on the 8th Dec., 1866, fixing the tolls to be levied at Ranney's Falls and Heeley's Falls, at one cent for each log of 13 feet in length, and a proportionate sum on pieces of greater length ; and one dollar on each crib of square timber. The company are not liable for the renewal of the works, in case of their failure from decay of materials, or their destruction by fire, flood or any other cause. It is their duty to keep an exact account of all monies collected by them, and to transmit the same to the Department of Public Works, as provided by the Orders in Council passed on the subject. The extraordinary repairs which from time to time were required have been executed at the expense of the Government, as also new works at localities other than those mentioned. Since the 20th of May, 1879, when the division of the Public Works Department into two Departments took place, the charge of the works connected with the Trent River navigation has not yet been apportioned between the two departments to which they respectively belong, but has been under the control of the Department of Railways and Canals.

THE TIMBER TRAFFIC AND THE Q. M. O. & O. RAILWAY.

We have no hesitation in affirming that a feeling of intense disappointment has been caused here by the failure of the owners of timber for this market, to make arrangements for shipping it to Quebec by Q.M.O. & O. Railway. It is well, however, to understand the causes that have so far prevented the inauguration of this most desirable traffic. Merchants having timber for Quebec, have of course a certain limit to which they can go in respect of the price to be paid for shipments. The first part of the route by rail to be traversed by this timber is that over the Canada Central Railway from Pembroke to Aylmer, a distance of rather less than 100 miles. From Aylmer to Quebec by Q. M. O. & O. Railway is 280 miles. The merchants who hava thus far attempted to bring timber by rail to Quebec, have found that on the 80 to 100 miles of the Canada Central Railway, the charge for the carriage of their freight has amounted to about two cents per ton per mile, or equivalent to $16 to $18 per car load for the run to Aylmer. This sum is found to be about one-half of the merchant's limit for shipping timber to Quebec, and consequently it has so far been necessary to unload the cars in the vicinity of Ottawa and send the wood to Quebec by water, owing to the very natural refusal of the management of the Government railway to convey it over that road 280 miles for the same figure as the Canada Central receives for carrying it about a third of the distance. The management of the Q.M.O. & O. Railway has, however, offered the lowest possible terms to the shippers in question, in order to foster and develope a traffic which is so urgently demanded in this city. With this object in view, a proposition has been made to shippers, looking to the carriage of timber from Aylmer to Quebec, at something like one instead of two cents per ton per mile, or an amount not exceeding $19 or $20 per car load for the whole distance from Aylmer to Quebec. A less amount would, it is said, entail an absolute loss upon the management of the Provincial road, which of course nobody desires. Mr. Chapleau has occupied himself very largely during his recent visit to Ottawa, in seeking to obtain some reduction in the rates of the Canada Central Railway, and, if possible, to secure some understanding between the management of the two roads relative to a similarity of rates. The Premier is not without hopes of accomplishing his project. The matter rests primarily, of course, with the Canada Central Railway, and it is to be hoped the management of this road will see the advisability of agreeing to such rates as will enable the Q.M.O. & O. Railway to assist in the development of this very important and desirable traffic.—*Quebec Chronicle.*

The Publishers of the CANADA LUMBERMAN desire to obtain a reliable and well informed correspondent in every lumbering centre in the Dominion of Canada, and to that end would ask those disposed to act as such, to communicate with them at once, stating the facilities they possess for obtaining *reliable*, early and full information as to the lumber trade in their respective districts, and the renumeration which they will expect for their services as such correspondents.

LOSSES BY FOREST FIRES.

The *American Agriculturalist* says :—

"We some time ago stated that the Superintendent of the Census had placed all that relates to Forestry, including lumbering, and whatever concerns forestry as a source of national wealth, in the hands of Prof. C. S. Sargent, of the Arnold Aboretum of Harvard University. How thorough his investigation would be, those who know him need not be told. In a general way we may say that his own journeys to the Rocky Mountains and to the Pacific, as far as the forests of Washington territory, his employing of local agents, and the sending of experts to important localities, have been but a part of his labors. To show how every ramification of the subject is provided for, we may refer to the circulars sent out to collect information as to forest fires. We often see articles in the journals lamenting the destruction of our forests by the demand for railroad ties and fuel ; the wanton waste in clearing for farms, and the rapid destruction by lumbermen. It is believed, by those best able to judge, that the destruction of our forests by fires, is greater than from all other causes togother. It is also known that such fires are annually increasing in number. It is believed that these fires are mainly due from avoidable causes, and that proper legislation is needed to prevent this useless waste of national wealth. For proper measures of prevention to be taken, it is an important point to know just the extent of the evil, and this it is proposed to learn by means of the Tenth Census. Prof. Sargent has prepared a circular to be addressed to the town officers in all parts of the country where forest fires may occur. This blank form, which can be readily filled, asks for the number of acres, or square miles of forests destroyed by fire in 1880 ; the value of the property thus destroyed ; causes generally producing such fires, and any suggestions relating to the general subject of forest fires and how they may be prevented or diminished."

TORONTO AND NIPISSING RAILWAY.

The following statement shows the supply of saw logs on hand adjacent to the Toronto and Nipissing Railway, on the 15th March, which will be supplemented during the spring to make up the estimated cut of 1881, at the places mentioned below :—

Manufacturer.	*Place.*	*Logs in ft.*	*Shipments.*
J. E. Gould	Coboconk	1,000,000	2,000,000
Capt. Corson	Victoria Road.		500,000
A. Washington.	" "	50,000	250,000
J. Graham	" "		50,000
McKenzie Bros.	Kirkfield	6,000	500,000
J. McDonald	"	1,700	150,000
J. Cowie	"		140,000
J. Roddie	Sunderland		20,000
I. J. Gould	Uxbridge		500,000
W. Link	"		75,000
H. Clarke	Goodwood	2,000,000	2,250,000
Bessie Bros.	"		1,500,000
White Bros.	Stouffville		100,000
J. Milne	Agincourt	400,000	30,000
W. A. Milne	"	750,000	100,000
J. Ramsden	Mount Albert.	500	50,000
E. B. Appleton	Vivian	3,000	700,000
R. McCormack	"	4,000	1,500,000
R. & A. Bessie	Ballantrae	5,000	1,200,000
W. S. Ramsay	Sutton	600,000	800,000
			12,415,000 ft.

THE UPPER OTTAWA.

Le Moniteur du Commerce says that the timber trade is full of hope at present. Latterly there had been abundant snowfalls on the Upper Ottawa, which is what the shantymen required. The cut has been large and snow was necessary to get the wood out of the forests. It is believed that the cut of square timber on the Upper Ottawa will reach 10,000,000 feet. During the last week twenty cars of square timber have arrived at Ottawa, and as soon as navigation opens they will be floated down for the Quebec market. Every day trains of lumber for the United States leave Ottawa by the Canada Central, the St. Lawrence & Ottawa, or the Q.M.O. & O. The opening of navigation at Ottawa gives promise of a greater activity in business than has ever been known there before.

A Vast Amount of Information.

THE CANADA LUMBERMAN.—Messrs. Toker & Co., of Peterborough, have purchased the above semi-monthly. The number of March 15th is to hand and contains a vast amount of interesting information in regard to the lumber trade. We have no doubt but that it will prove a success under the new management.—*Whitby Gazette.*

PENETANGUISHENE.

A report which appeared in one of the monetary journals gave the estimated cut of lumber in Penetangishene for 1880, at six millions. The figures represent the cut of only one mill, and not of the mills collectively. Our cut this year, says a correspondent, will not be the full capacity of the mills, as our two new mills will not be prepared for working up to the full capacity until the following year, The figures, however, will be as near as possible as follows : Penetanguishene Lumber Company, five million ; C. Beck & Co., six million ; D. Davidson, three and a half million; F. McGibbon, three million, making an aggregate of seventeen and a half million. To this may be added a little more for the cut of Copeland & Marchildar's mills. The timber shipments over the Northern *via* Penetanguishene will be very large, as the great bulk of the timber from the north will be shipped on the rail at Penetanguishene. A good deal of outside lumber, too, is expected to go over the line from mills on the Georgian Bay, and the wharf accommodation is expected to prove altogether inadequate for the requirements of the place.

Think While you Read.

The *Teacher's Journal*, in an article on methods of study, reminds the student that the first essential to successful study is the power of concentration of thought. This power is largely a matter of habit and cultivation. Read five pages of history in a lackadaisical manner. Close the book and write out all you can remember. Then compare your production with the printed matter, and you will be able to judge of your proficiency. Read five pages more with fixed attention and a resolution to retain the subject, and compare as before. You will find a marked improvement. If your memory is treacherous read but very little, and always write out the subject. When you hear a sermon or address, *hear* it, and afterward reduce it to writing. Read no novels, and do not read aloud to please others unless you care (nothing) for the article yourself. A practiced reader can read aloud for hours and carry on an indepenpent train of thought all the time. This ruins the faculty of study as well as the memory. Dismiss all other subjects but the one in hand. Let the ear be deaf to all sounds, and the eye blind to all sights. Let the sense of touch sleep, and smell and taste be as though they were not. A lesson learned in this state of mind will stay with you, and will not need to be "crammed" again the night before examination. It will be like lines carved deep into the rock, or chiseled on the Rosetta stone. The other method is the dim tracing of obscure letters in the sand, which the next wave obliterates.

Travelling up Stream.

Travelling up stream with no other power the force of the current seems an impossibility, and no douht it is so under ordinary circumstances ; but a device has been invented for accomplishing that result. It consists of a car having the ordinary flange wheels and intended to run on rails placed on the edges of a flume, The power is the water in the flume acting on two paddle-wheels at either end of the car attached to the axles of the carriage, The force of the current turns the paddle wheels in an opposite direction from its flow as a matter of course turning the carriage wheels at the same time and propelling the car up stream. When it is desired to follow the course of the stream the paddle wheels are locked so that they cannot revolve and the carriage is carried down with the current. All that is required for this novel railroad is a stream of water passing through a flume, the rails on the sides, and the car with paddles corresponding in shape to the section of the flume. It is a Californian invention and its practicability is said to be established. A test trial with a working model has demonstrated the capacity of the carriage to carry about 8 lbs. of olad (exclusive of its own weight) for every inch (miner's measure) of water in the flume. A flume of six hundred inches of water would therefore furnish power to transport a load of about five thousand pounds, on any grade from four to twenty inches to the rod, at a speed of from four to eight miles an hour ; a less grade causing a slower run.

Market Reports.

Toronto.

LUMBER.—The *Journal of Commerce* says that a number of shipments of clear and pickings have been made to the States, and receipts here are fair. It was generally expected that prices would he higher at the opening this spring, but, with the exception of a few kinds of hardwood, they are unchanged. We quote:

Clear, 1¼ and upwards	$28 00@30 00
Pickings, 1¼ and upwards	18 00@20 00
Inch, clear	18 00@20 00
Shipping culls	8 50@10 00
XXX 16-inch shingles	2 10@ 2 20
Lath	1 25@ 1 35

Montreal.

Ash, 1 to 4-in, ₱ M	$15 00@17 00
" square ₱ M	22 00@25 00
Basswood, ⅝-in, ₱ M	12 00@14 00
" 1-in., "	15 00@16 00
Black walnut, culls, ₱ M	55 00@60 00
" 2nd quality, ₱ M	85 00@90 00
" 1st "	100 00@105 00
Cedar, round, ₱ ft	0 08@ 0 10
" flat, "	0 08@ 0 10
" square "	0 10@ 0 12
Grey elm, 1st quality, ₱ M	20 00@25 00
Rock " "	35 00@40 00
Spruce, 1 to 3 in., ₱ M	7 50@ 8 00
" square, "	12 00@14 00
Red oak, ₱ M	35 00@40 00
Pine, clear, 1st quality, ₱ M	35 00@40 00
" 2nd "	20 00@25 00
" 3rd "	12 00@15 00

Quebec Sales and Stocks.

We learn from an undoubted authority in Quebec, that their merchants now in Liverpool have done a fair amount of business at satisfactory prices in timber, but that deals were difficult of sale and that the business done in them had been on a limited scale. This success in Liverpool had led to some little enquiry in Quebec for square white pine and to the sale of three rafts. One of these was timber of 1877—70 feet average and 17 inches girth; price, 27c. per square foot. Another raft of 1877, 67 feet and 17½ inches girth, with only from 5 to 6 per cent., first-class timber in it, price 24c. The other, a raft of superior Kippewa timber, the price and particulars of which were not stated.

These sales reduced the unsold timber in Quebec to three lots, in all 750,000 feet of square timber, besides about 60,000 feet of waney timber.

Chicago.

CHICAGO, March 16, 1881.—With a partial return of more moderate weather, the lumber trade of this city shows signs of the improvement which has been anticipated by the dealers and so often predicted in these columns. The dealers report a demand fully equal to their expectations and fully up to their ability to supply in such stock as will bear shipping. A careful estimate of the stock of one-inch common boards and fencing, now in the yards of this city, discloses the fact that of the former there is now on hand, both of dry and green, of all kinds of boards below D stock, of No. 1, but 24,224,770 feet, and of No. 2, 10,231,000 feet. This is not for all lengths a stock equal to a proper proportion of 16 feet lengths in a well adjusted condition of this market. In fencing strips the inventory is no more satisfactory, showing but 4,671,996 feet of 12 feet lengths, 5,562,930 feet of 14 feet, and 20,997,000 feet of 16 feet in the No. 1 grade, and a total for all lengths of 11,172,000 feet of No. 2. Of the quality enumerated, fully 2,000,000 feet had been already sold, reducing the total yet in the market to about 29,000,000 feet. That this quantity, either of boards or of fencing, will supply the demands of the market until such time as navigation shall fully replenish the supply, is out of the question.

A price list meeting of the dealers was held to-day, at which a few changes only were thought advisable, or at present imperative. These were adopted with unanimity, the only objection urged against them being from those who thought higher rates were warranted. Under the head of box boards, the item C was advanced from $26 to $28. Fencing flooring was raised from $15.50 to $16, and 10-foot fencing from $14.50 to $15. Narrow boards, dressed and matched, and ship lap, and 10-inch common, were advanced 50 cents each. Common and cu l boards were raised 50 cents on each item of the list. In fencing, the No. 1 grade was advanced 50 cents and No. 2 grades $1. Dressed pickets were reduced $1, on account of the course taken by a leading planing-mill firm with regard to them, and a committee was appointed to confer with that house, with a view to harmony. In dimension grades, joist and scantling, 12 to 18 feet, were advanced to $12; timber, 4x4 to 8x8, up to 18 feet in length, to $13; 2x4, 18 feet, to $13; 10 and 20 feet to $14, and 20-foot joist and scantling to $17. Extra A shingles were fixed at $3, and standard A at $2.90. Oak timber is firmer; butternut is $5 higher; maple flooring has advanced from $2 to $3, and walnut, ⅝ and ½-inch, 10 inches and up, select, is quoted $3 higher.—*Northwestern Lumberman.*

YARD QUOTATIONS—CAR LOTS—DRY.

FINISHING LUMBER—ROUGH.

1st, 2d clear, 1, 1¼ and 1½ in.	$43 00
1st and 2d clear, 2 in	45 00
1st and 2d clear, 3 in	50 00
3d clear, 1¼, 1½ and 2 in	38 00
7 and 8 inch clear	32 00
Select 1 in. A	32 00
Select B	22 00
1¼, 2 in. B	26 00
7 and 8 in. B	26 00
Clear and Select 2x4	28 00
2x6 and 2x8	32 00

All one length $1 extra.

WAGGON-BOX STUFF.

3-in and up. A	$43 00
4-in. and up. B	37 00
14-in. and up. C	28 00
D	17 00

All 14 feet $2 extra.

STOCK BOARDS.

12 in. A, 12 to 16 ft	$37 00
12 in. B	33 00
12 in. C	28 00
12 in. D, 12, 14 and 16 ft	17 00
12 in. D, 18 ft	19 00
12 in., 20 ft	20 00
10 in. A	35 00
10 in. B	30 00
10 in. C	24 00

COMMON BOARDS—ROUGH.

	Dry.
Common boards, 12 in	$15 00
10 and 20 ft	14 00
12, 14, 16 and 18 ft	13 50
Culls, all lengths	11 50
1¼ and 1½ com	13 50

TIMBER AND DIMENSION—DRY.

Small timber, 18 ft. and under	$11 50
12, 14, 16 and 18 ft. joist	12 50
2x4, 10 and 20 ft	13 50
2x4, 18 ft	$11 00@12 00
20 feet	13 00
22 feet	16 00
24 feet	17 00
26 feet	20 00
28 feet	20 00
30 feet	20 00
2 in. cull plank, all widths	9 00
2x4 culls, all lengths	
2x6 culls, all lengths	

SHINGLES—16-INCH—DRY—CAR LOTS.

Clear	$3 25
Extra A	3 00
Standard A	2 90
Cedar shingles	$2 00@2 50

Ends of cars and less than car load lots, five cents per thousand extra. The shingles handled in the Chicago market are all 16-inch.

PICKETS—LATH.

Flat, select and clear, d. and h	$20 00
Square, d. and p	20 00
Flat, rough, good	15 00
Flat, rough, common	11 00
Dry lath	2 25

CEDAR POSTS AND POLES.

Sawed ½ of 6½ in., 7 ft	$19 00
½ 6 " 7 ft	10 50
½ 7 " 7 ft	12 00
½ 8 " 7 ft	16 50
¼ 8 " 7 ft	9 00
¼ 9, 10, 11 and 12 in., 7 ft. long	12 00
4 in., round, full length	12 00
5 " " "	16 00
6 " " "	20 00
7 " " "	22 00
8 " " "	30 00
10 feet, per inch	6 00
12 " "	9 00
14 " "	10 00
16 " "	$11 00@13 50
20 " "	16 00

Albany.

Quotations at the yards are as follows:—

Pine, clear, ₱ M	$48 00@60 00
Pine, fourths	43 00@55 00
Pine, selects	38 00@45 00
Pine, good box	17 00@28 00
Pine, common box	14 00@17 00
Pine, 10-in. plank	38 00@42 00
Pine, 10-in. plank, culls	21 00@23 00
Pine boards, 10-in	25 00@28 00
Pine, 10-in. boards, culls	17 00@18 00
Pine, 10-in. boards, 16 ft., ₱ M	28 00@00 00
Pine, 12-in. boards, 16 ft	28 00@00 00
Pine, 12-in. boards, 13 ft	28 00@00 00
Pine, 1¼ in. siding, select	42 00@00 00
Pine, 1¼-in. siding, common	18 00@00 00
Pine, 1-in. siding, select	40 00@00 00
Pine, inch siding, common	16 00@00 00
Shingles, shaved, pine	6 00@00 00
" 2nd quality	4 50@00 00
" extra, sawed, pine	4 25@00 00
" clear, "	3 25@00 00
" cedar, mixed	2 75@00 00

Tonawanda.

CARGO LOTS—MICHIGAN INSPECTION.

Three uppers	$38 00@40 00
Common	17 50@19 50
Culls	15 00@17 00

Oswego, N.Y.

Three uppers	$42 00@45 00
Pickings	32 00@35 00
Pine, common	20 00@25 00
Common	14 00@16 00
Culls	12 00@14 00
Mill run lots	16 00@20 00
Sidings, selected, 1 inch	30 00@33 00
" 1¼ inch	30 00@38 00
Mill run, 1x10, 13 to 16 ft	16 00@20 00
selected	20 00@25 00
shippers	15 00@16 00
Mill run, 1 and 1¼ inch strips	15 00@18 00
Culls, selected	22 00@30 00
Culls	11 00@13 00
1x6 selected for clapboards	24 00@35 00
Shingles, XXX, 18 inch, pine	3 50@ 3 75
XXX, 18 inch, cedar	3 00@ 3 50
Lath	1 50@ 1 75

Buffalo.

We quote cargo lots:

Uppers	$35 00@40 00
Common	16 00@19 00
Culls	11 00@12 00
Dressing stocks	18 00@20 00
Dressing sidings	17 00@19 00

The English Wood Market.

James Smith & Co's Liverpool wood circular of March 1st, says:—

The arrivals since our last have been 22 vessels, 13,482 tons, against 12 vessels, 9,779 tons in a corresponding period last year, and 15 vessels, 12,995 tons in 1879.

FROM 26TH JANUARY TO 28TH FEBRUARY, 1881.

	Vessels.	Tons.
Quebec	1	921
St. John, N.B., &c.	4	3,734
United States	13	7,563
Baltic	4	1,264
Total	22	13,481

FROM 26TH JANUARY TO 28TH FEBRUARY, 1880.

	Vessels. Nil.	Tons. Nil.
Quebec		
St. John, N.B., &c.	6	7,055
United States	1	1,154
Baltic	5	1,580
Total	12	9,779

FROM 25TH JANUARY TO 27TH FEBRUARY, 1879.

	Vessels. Nil.	Tons. Nil.
Quebec		
St. John, N.B., &c.	7	6,483
United States	6	5,512
Baltic	2	1,000
Total	15	12,995

The demand in the wood trade continues sluggish, so that little change takes place in the stocks, and if this continues there will be more than ample supplies until the new import comes in. Sales on contract are very difficult to make, and lower prices are being accepted by shippers; this applies more especially to spruce deals and pitch pine. Quebec woods may be said to fully maintain the rates demanded by shippers. Freights continue low and without change, although there are not so many vessels offering at the moment. Money is easy, and the Bank of England reduced the rate of discount on the 17th February to 3 per cent.

COLONIAL WOODS.—The import of yellow pine consists of 56,000 feet, against 25,000 feet last year. The consumption has slightly fallen off, and the stock is consequently still heavy. Sales have been entirely of a retail character, as the fresh arrival consists of a derelict cargo just received, which is on timber merchants' account. Red pine has improved in consumption during the month, but the stock is considerably heavier than that of last year. There are no sales reported. Elm—The fresh arrival consists of 2,080 feet, and the consumption has been 3,000 feet, against 2,000 feet last February; the stock is rather heavy, but with the improved consumption it may not be considered excessive. Oak—The consumption has fallen off very considerably; the stock consists of 476,000 feet; the sales have been by retail only. Black walnut is in fair demand, and sales have been made during the month at from 5s. to 5s. 9d. per cubic foot, averaging about 5s. 4d. per foot. Birch has been in better demand, and the stock has been considerably reduced, consisting now of 207,000 feet, against 153,000 feet; a fresh arrival of 724 logs, ex-Keewaydin, from St. John, was offered at auction, and realized from 14½d.@23½d., averaging 16¼d. per foot. N.B. & N.S. spruce deals:—There is no falling off in consumption for the month as compared with the same time last year, but the stock is still 8,000 standards more, and prices have still further given way; the sales during the month have been by private only, say £6 16s. 6d. for Sheet Harbor, £7 1s. 3d. for Halifax, and £7 2s. 6d. for St. John, and for the new season shipment, contracts have been made at from 5s.@10s. per standard below last spring prices, say £6 17s. 6d.@£7 for Miramichi, £6 15s. for Shediac, and £6 5s. for other inferior shipments, all cost, freight and insurance. The stock of pine deals is light, but the demand is poor, and there will be quite sufficient for the requirements until fresh arrivals come in. Quebec pine deals have been in light demand, consumption having reached but 437 standards, against 1,650 standards at same time last year, and the stock remains very heavy, viz.: 10,088 standards against 4,033 standards; sales have been by private only. Quebec pipe and West India staves are now in fair request, but no sales are reported. Palings and lath-wood are quiet, and no sales have been reported.

Irish Markets.

The *Irish Times* says that there is a better tone in the timber market this week, though but little actual improvement in business can be recorded. The transactions in timber are confined to the supply of urgent wants for immediate consumption, save in a few exceptional cases where merchants in the country, knowing that with any increased demand prices will be higher, have taken advantage of the present low rates to buy some stock for future requirements. The disposition of holders, however, is not to look far ahead at current prices:—

St. John and Miramichi deals	£14 10s@15
1st Quebec deals	£18@22
2nd do	£14 10s@15 10
3rd do	£13 10s@14
4th do	£13
White Norway flooring, 7x1	11s 6d
Oak	£7 10s
Ash	10s
Elm	6os
Birch	5os@6o
Red pine	7os@8o
Yellow pine	9os@1oo
Board pine	1os
Pitch pine	6os
Memel, fur sized	6os@8o
do under sized	5os@6o

THE capacity of Beatty's mill, Parry Sound, Ont., will be nearly doubled for this season's work.

Advertisements.

Wanted.

A SECOND HAND DOUBLE EDGER; also a LATH MACHINE, both in good repair. Reply stating lowest cash terms or particulars to Box 1002, Peterborough. L10

For Sale.

A 40 INCH LEFFELL WHEEL and COMPLETE CIRCULAR RIG, all in good order, suitable for a fifteen foot head. Apply to Box 1002, Peterborough. L10

Reid & Co.,

WHOLESALE LUMBER DEALERS. Lumber, lath, shingles, &c. Car lots to suit customers. Best Culls in the market at from $6 to $7 per M.

OFFICE ON DOCK.—Esplande, foot of Shelbourne Street, Toronto b15

Hardwood Timber Land

FOR SALE.

FOR SALE, 1200 ACRES HARDWOOD TIMBER LAND near Nipissing Railway, Coboconk. Easy terms. OSHAWA CABINET CO., Oshawa. b13

Timber Limits for Sale.

SEVERAL MOST VALUABLE TIMBER LIMITS on North Shore of Lake Huron.

For particulars apply to THOS. SHORTISS, Imperial Bank Building, Toronto. b12

Situation Wanted.

A Book-keeper of first-class experience desires a situation with a lumber firm. An opportunity of acquiring knowledge of the lumber trade more of an object than the amount of salary. Unexceptional references both as to character and ability.

b15 Apply to the Editor of THE CANADA LUMBERMAN.

The Stewart House,

Headquarters of Lumbermen in Peterborough, corner of Hunter and Water Streets. Good accommodation. Terms, $1 per day. Free 'bus at trains.

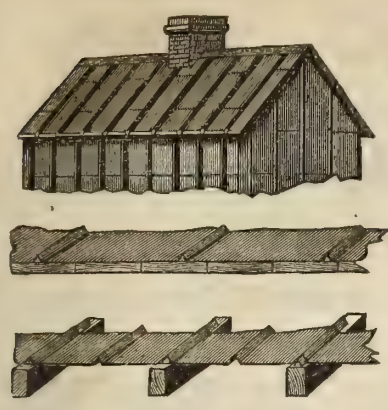
b15 T. CAVANAGH, Proprietor.

E. S. VINDIN,

Commission, Shipping, Forwarding and General Agent.

LUMBER MERCHANT

Office, Tempest's Block, Port Hope. L11



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Can give the Best of References in every State and Territory.

POTTER IRON ROOFING COMP'Y,

101, 103 and 105 West Front Street,
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All Kinds of CORRUGATED IRON Furnished.

Send for Illustrated Circulars, naming THE CANADA LUMBERMAN. 12L11

Allandale Junction Hotel

Travellers by Northern Railway have 15 to 20 minutes by all trains, for refreshments. Solid meals. Tea and coffee at counter. Fine brands of Liquors and choice Cigars. b17 E. S. MEEKING, Proprietor.

Orillia House,

ORILLIA.

New and Commodious Brick Building; best north of Toronto; splendid sample rooms; centrally located; free 'bus. b20 JOHN KELLY, Proprietor.

The Queen's Hotel,

TORONTO, CANADA.

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St. Lawrence Hall,

PORT HOPE.

Is noted for its superior home-like comforts—a well kept table, equalling the best hotels in Toronto, and large, well-furnished rooms. Good sample rooms on ground flour. Walton Street, Port Hope.
b26 WM. MACKIE, Proprietor.

St. Louis Hotel.

THE RUSSELL HOTEL CO., Proprietors.

WILLIS RUSSELL, Pres., Quebec.

This hotel, which is unrivalled for size, style and locality in Quebec, is open throughout the year for pleasure and business travel. b18

Queen's Hotel,

BRACEBRIDGE.

JOHN HIGGINS, Proprietor. The proprietor (late of Georgetown,) having lately purchased the above hotel,) will endeavor to make it one of the best houses in the District of Muskoka. Tourists and hunting parties will receive every possible attention. Free 'bus to and from steamboat wharf. Terms, $1 per day. b20

Fraser's Hotel,

GRAVENHURST, ONT.

HENRY FRASER, proprietor, (successor to Dougland Brown.) Mr. Fraser having purchased and thoroughly renovated and refitted that old established hotel, so long and popularly kept and owned by Dougland Brown, in the Village of Gravenhurst, is now in a position to attend to the wants of the travelling and general public. Parties *en route* to the Muskoka District, will find "Fraser's" a comfortable stopping place. The Bar and Larder are well furnished. Convenient Sample Rooms for Commercial Men. Good stabling and attentive hostler. Free 'bus to and from trains and steamboats. b26

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Manufactured from the BEST English Cast Steel and Warranted equal to the Best Imported File.

RECUT BY HAND, and EQUAL TO NEW FOR USE

PRICE LIST on application.

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35 Sherbourne St., Toronto. 6L11

M. BRENNEN,

MANUFACTURER AND WHOLESALE DEALER IN

Lumber, Lath and Shingles,

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HAMILTON, ONT

MILLS AND TIMBER LIMITS AT SILVER CREEK, TIAGO P. O., ONT.

Bill Stuff cut from 10 to 60 feet. Cedar Posts on hand.

Orders sent to M. BRENNEN, Tiago, P. O., will receive prompt attention b15

KERR BROS.

PRACTICAL

FOUNDERS, MACHINISTS,

And MILLWRIGHTS.

Manufacturers of Marine and Horizontal and Portable Engines, Boilers, Grain Elevators and Steam Hoist, Saw and Flour Mill Machinery,
with latest improvements, a specialty.

The Abel Edward's Centennial Turbine Water Wheel.

Rodebaugh's Saw Frame, Mill Dogs and Saw Guides.

Water-works, the latest and most improved, made to Order.

Light and Heavy Brass and Iron Castings

Plans and Specifications on application.

The Walkerville Foundry

AND

MACHINE WORKS.

Walkerville, Ont., Dec., 1880. b15

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OTTAWA.

JAS. A. GOUIN, - - PROPRIETOR,

Is the Favourite Resort of Leading Public men of the Dominion attending the annual Session of Parliament.

Ministers of the Crown, Senators, Members of Parliament, Public Officials, as well as those having business with the various Departments of the Government. It is also the headquarters of those having dealings with the princely Lumber Manufacturers in the Great Pine Valley, of which Ottawa is the acknowledged centre.

THE RUSSEL HOUSE being central, almost abutting on the magnificant PARLIAMENT and DEPARTMENTAL BUILDING—the pride of the Country—is thus conveniently situated for those visiting the City on public business. But the location is also everything that could be desired alike for the man of business and the man of pleasure. A few minutes walk brings the guest of the Hotel within reach, not only of all the principal business resorts, but also of the most splendid Mountain and Valley Scenery that can be seen anywhere, as also of the two almost unrivalled Waterfalls—the Chaudiere and Rideau—and of the extensive Manufacturing Establishments and Depots of the leading Lumberman. But, besides the beautiful scenery, which, it may be mentioned, includes the magnificant Ottawa and two of its grand tributaries—the Rideau and Gatineau—there are in the immediate neighborhood, beautiful Lakes and apparently never-ending woods, which afford opportunities for the finest Fishing and Shooting that can be obtained on the Continent.

THE RUSSELL HOUSE affords excellent accommodation for 300 guests; its table is abundantly supplied with Viands of the choicest description, in season, and nothing is left undone to make every visitor feel comfortably "at home."

☞ **Omnibusses meet the Arrival of every Train and Boat.** b26

Hotel Ottawa,

No. 21 North Side King Square,

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E. COSMAN, PROPRIETOR.

Terms $1.00 to $1.50 per day. 13

JAMES HADDEN,

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Shingles and Dressed Stuff.

Foxmead, P. O., County of Simcoe, Ont.

Two Planers for sale or exchange for a Boiler. b26

CHAS. M. LARSEN,

Manufacturer of all kinds of Lacquered and Enamelled Woodwork, Turning and Carving in

WOOD, HORN AND IVORY.

BILLIARD BALLS

Turned and coloured a speciality.

☞ MEERCHAUM and AMBER GOODS repaired in first-class style. b17

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The UNIVERSAL SUSPENDER.

SOME REASONS **why they are the best:—**

1st.—No Elastic requied.
2nd.—Is slack when stooping.
3rd.—It never slips off the shoulders.
4th.—Sold at prices of common suspenders.

Manufactured by C. E. RAMAGE & CO.

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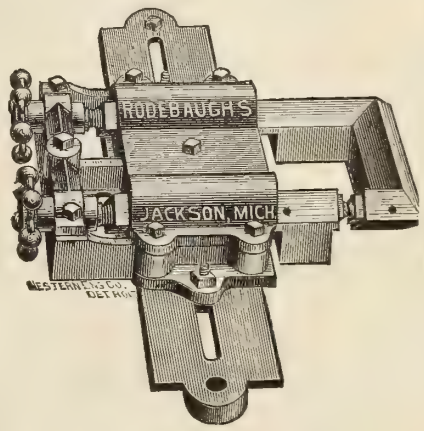
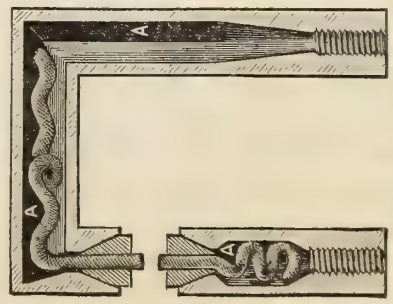


G. W. Rodebaugh's patent Saw Guide will recommend itself to every practical sawer. All that is required is a trial.



No heating of Saws. No danger in setting. Trial free of charge. ☞ The whole complete only $25. Manufactured in Canada by

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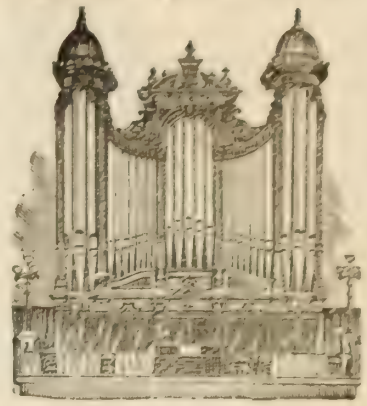
G. W. RODEBAUGH & CO.,

b15 WINDSOR, ONT.

S. R. WARREN & SON,

Church Organ Builders.



Specifications and all information promptly furnished on application.

Factory and Warerooms:

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THE GENUINE SILVER-STEEL.

Lance Tooth

CROSS-CUT SAW!

It stands without a rival, and is the fastest cutting saw in the world. It has beaten the best Canadian and American made saws 33¼ per cent in every contest. Its superiority consists of its excellent temper. It is tempered under the secret Chemical Process, which toughens and refines the steel. It gives a finer and keener cutting edge, and will hold it twice as long as any other process. We have the sole right for this process for the Dominion of Canada.

None genuine that are not like the above cut, with registered trade mark with the word "The Lance," and Maple Leaf with our name. Price $1 per foot.

CAUTION.—Beware of Counterfeits. There are inferior counterfeits on the market, which are intended to be sold at a high price upon the reputation of this saw. We will send to any address a saw exactly like any counterfeit, warranted equal in quality or no sale, at 60c. per foot. Therefore do not be humbugged into paying a first-class price for a second-class saw. A fact to bear in mind is that if the material and temper are not of the very best quality the shape of the teeth amounts nothing. A saw, like a knive, will not cut fast without it will hold a keen, cutting edge. We have cut off a 14-inch sound basswood log in eight seconds with this saw. Manufactured only by

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Manufacturers of Saws, Plastering Trowels, Straw Knives, &c. &c.

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ACTON, ONTARIO,

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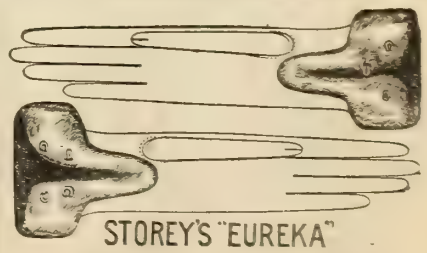
The best description of GLOVES and MITTS in every variety of material and style manufactured by us. b15



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SPRING GLOVE FASTENER, PAT'D

This cu- is a simile of Package.

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PATRICK BOYLE,
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Send for our new price list of Watches, Diamonds, Silverware, Jewellery, &c., sent post prepaid on application. Goods sent C. O. D. to any part of Canada. We have dozens of testimonials similar to the above, plainly showing that 83 King St. East is the place to buy your goods.

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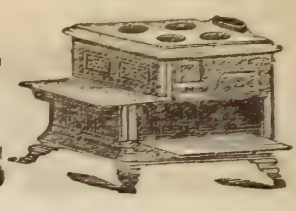

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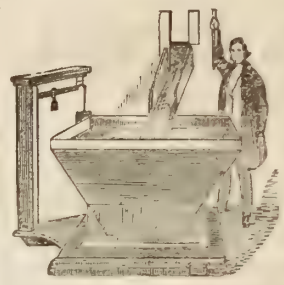

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Saw Millers, &c.

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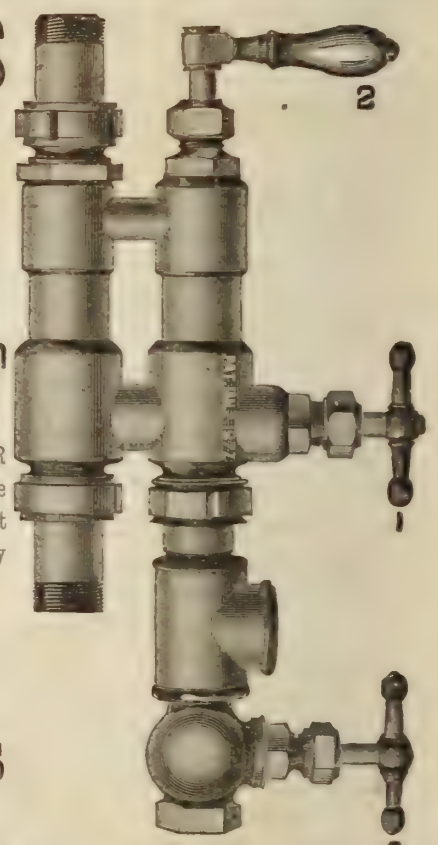

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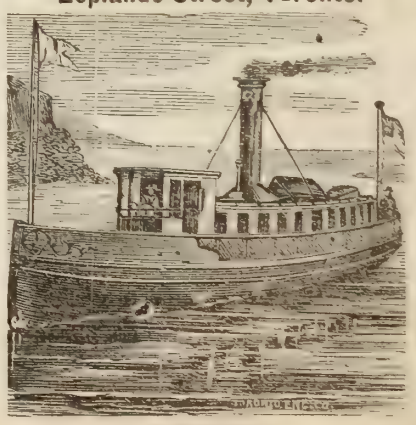

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One Hundred and Fifty First-class Flour Barrels in Ten Hours,

made from veneered wood of two thicknesses. The inside is one solid sheet of veneer running around the barrel, making in reality one hoop from top to bottom, and in the outside thickness the grain is reversed, running up and down, finished with five hoops two inches wide, reversed again, making the barrel almost three thicknesses, which gives the package superior strength, tightness and durability over the ordinary hand-made flour barrels, yet with all its many advantages cost less than the old style of package. My barrel machine is arranged to make all sized packages from a large barrel down to small nail kegs, butter packages and cheese boxes. I am open to prove at any time the superior strength of my barrel. That one will stand more hardship by any actual test than one hundred of the old ordinary flour barrels. County rights for sale, and all information given by applying to

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Specialties :
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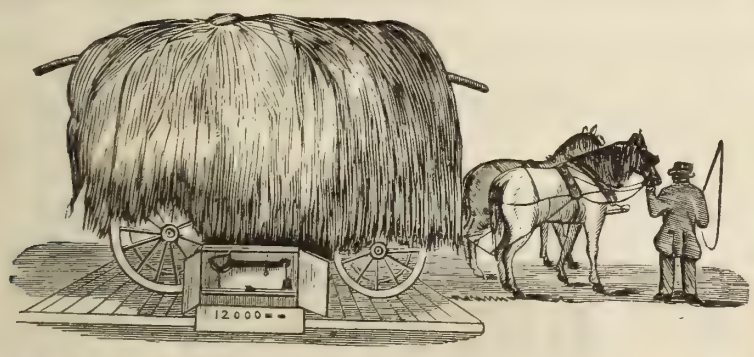

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This Scales have received 29 FIRST PRIZES, MEDAL and GOVERNOR GENERAL'S DIPLOMA.

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Champion Portable Saw Mills

ENGINES ON WHEELS.

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WHEN IN THE CITY TO PURCHASE THEIR CLOTHING.

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All our Clothing is Cut and Made on the Premises, by first class competent Workmen, and quite equal to Ordered Clothing

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It will give the subscriber much pleasure to forward, post free, to any address, on application, a pamphlet, containing instruction and information that have been found of the greatest practical use to dealers and consumers of machinery oil in Canada. It contains the fullest information as to the different kinds of oils, their qualities and uses, thus enabling the consumer to make choice of the very oil best adapted to his wants, and also enables the merchant to select the kinds most likely to be in demand in his neighborhood. The pamphlet shows conclusively that oils properly manufactured from petroleum, are vastly superior to any *animal* or *vegetable* oil. I am now making the same qualities of "Extra" and "XX" oils I manufactured from 1870 to 1873. They are *guaranteed not to thicken with extreme cold*, and warranted to give satisfaction in every particular. Beware of Agents soliciting your orders without my trade-marked order-book.

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Wholesale Supply Depot at Bracebridge,

WHERE EVERYTHING IN THE SHAPE OF

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CAN BE OBTAINED IN LARGE OR SMALL QUANTITIES, AT WHOLESALE RATES.
Outside quotations or Correspondence solicited.

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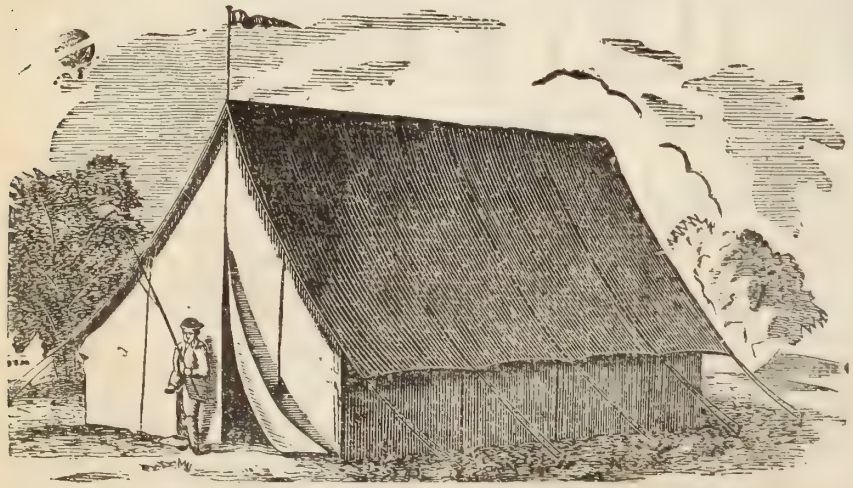
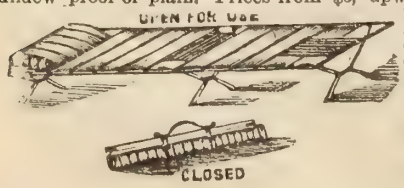


manufacturers of Tents for Lumbermen, Sportsmen, Camp Meetings, Photographers, Lawn and military Encampments, with or without extra roofs, all sizes and styles, white or fancy striped, Mildew proof or plain. Prices from $5, upwards. Flags of all descriptions, (regulation sizes) made of the best of silk-finish bunting. CAMP BEDS (Bradley's Patent) the best bed ever invented; size when folded 2 x 6 in.; 3 feet long, weighing only 11 pounds, but strong enough to bear the weight of any man. Waterproof wagon and horse-covers, tarpaulins sheets, coats and leggings of every description made to order on the premises. ☞Special rates to Lumbermen. Send for catalogue and price list to



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JAMES D. McARTHUR - - - Manager.

MANUFACTURERS OF

Pure Oak Tanned Leather Belting!

FIRE ENGINE HOSE, LACE, LEATHER,

OAK TANNED SOLE LEATHER, ETC., ETC.

STITCHED AND RIBBED BELTING MADE TO ORDER.

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FOR READY-MADE CLOTHING

This House stands at the head, having manufactured Clothing in Toronto for over Forty Years, and always gave satisfaction to customers. ☞THEY IMPORT THEIR OWN WOOLLENS FROM EUROPE, and Manufacture the Clothing on the premises.

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GENTS' SHIRTS, UNDERCLOTHING, TIES and GLOVES

R. WALKER & SONS,

GOLDEN LION, KING STREET, TORONTO. b19

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The Bell Organs have just received the HIGHEST AWARD and SPECIAL PRIZE (Gold Medal) at the International Exhibition, Sydney, Australia, this year for their Organs over all the English and American makers. This along with the unlimited awards, prove that

THE BELL ORGANS LEAD THE WORLD!

WE RECEIVED
Medal and Diploma.....Provincial Exhibition, 1871
Medal and Diploma.....Centennial Exhibition, 1876
International Medal & Diploma, Sydney, Aus. 1877

WE RECEIVED
Only Medal for Parlor Organ, Provincial Ex., 1878
Only Medal for Parlor Organ, Industrial Ex., 1879
And Gold Medal.....at Sydney Australia, 1880

The Bell Organ Manufactory is the Largest and Oldest in the British Empire, and the fact that we have sold nearly 15,000 proves that they are the best in the market. ☞We guarantee all our Organs for five years. Correspondence invited. Illustrated Catalogue mailed free.

W. BELL & CO.

b16 41 to 47 East Market Square, GUELPH, ONT.

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All Printing done in the Highest Style of the Art, and at Lowest Living Prices.

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For Schedule of Prices address, describing the kind and quality of work desired,

TOKER & CO.,

"THE CANADA LUMBERMAN,"

PETERBOROUGH, ONTARIO

M. Covel's Latest Improved Automatic Saw Sharpener!

Is the Most Perfect Machine that has ever been Introduced into Mills for that purpose.

CIRCULAR SAW STEAM FEED!

I would also call special attention to my

Heavy Circular Saw Mills

and for STEAM MILLS, would recommend the Steam Feed, having put in several which are giving the best of satisfaction, as will be seen by the following testimonials:—

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WM. HAMILTON, ESQ., Peterborough.

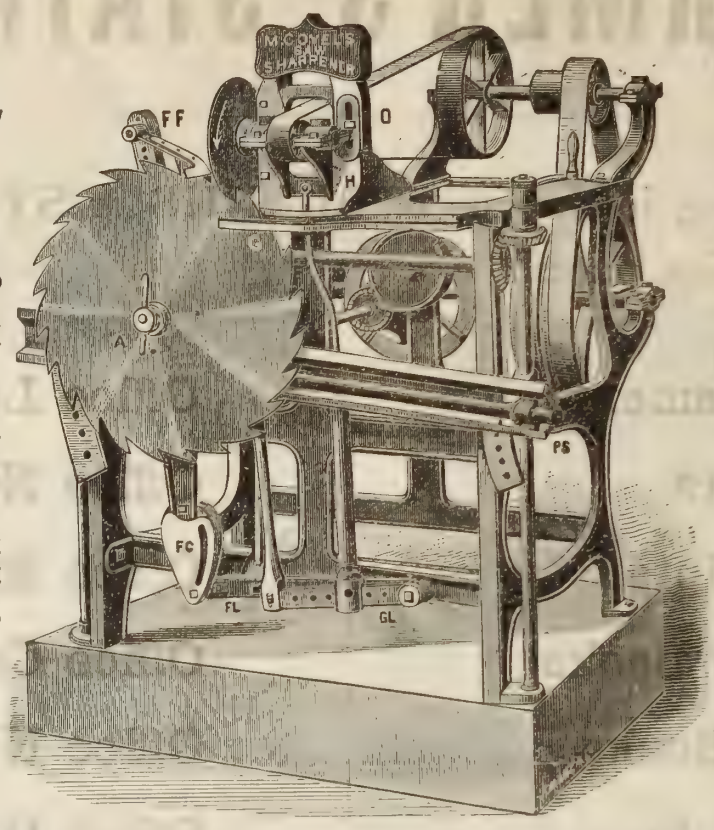
DEAR SIR—I have used your Steam Feed for near four months, and it has given me perfect satisfaction in every way; it is admitted by every person who has seen it work to be the best feed ever invented. Since I put it into my mill, I have not lost ten minutes time fixing anything belonging to it. I can cut 18 boards 13 ft. long in one minute. It can do much smoother and better work than the pinion feed. It is easily governed and reverses the carriages instantly. I am thoroughly satisfied with it and can recommend it to any person who has a Circular Saw Mill for cutting long or short logs. I consider I have cut more lumber than will pay for the Steam Feed since I got it than I would have cut had I not put it in.

Yours respectfully,
WILLIAM TAIT,
Lumberman, Gravenhurst.

TORONTO, August 11th, 1880.

WM. HAMILTON, Peterborough, Ont.

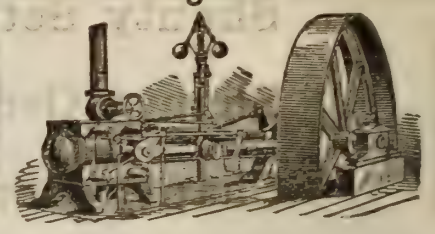
DEAR SIR—The Steam Feed you put in is working splendidly. Yours, &c.,
THOMPSON, SMITH & SON.



MILL MACHINERY!

I am also manufacturing Saw Mill Machinery, for all sizes of Gang or Circular Mills, Span or Double Circulars for Slabbing Small Logs. My Patent Jack Chain for drawing logs into Saw Mills, acknowledged by all to be the Cheapest and best ever got up; also, my Patent Lumber Markers, different sizes of Edgers, Gang Lath Mills, Trimmers, Power Gummers, and all Machinery used in a first class Gang or Circular Saw Mill; also, small Hand Gummers for use in the woods, for Cross-cut Saws. Rotary Pumps of different sizes, for Fire Protection in Mills, &c.

Horizontal Engines and Boilers

CORLISS  ENGINES

Where economy of fuel is the great consideration, along with uniformity of speed, such as is required in Grist and Flouring Mills, Woollen and Cotton Factories, or large Factories of any kind, I supply the Corliss Engine. I feel justified in saying that our Style, Workmanship and Finish on this Engine will be no discredit to its renown, and certainly is not equalled in this country for economy of fuel. I have them working at 2½ pounds of coal per horse-power per hour. L10

WILLIAM HAMILTON - - PETERBOROUGH, ONT.

F. E. DIXON & CO.

MANUFACTURERS OF PURE BARK TANNED

LEATHER BELTING

First Prize, Provincial Exhibition.....Ottawa, 1875
First Prize, Provincial Exhibition.....Hamilton, 1876
First Prize, Provincial Exhibition.....London, 1877
First Prize, Industrial Exhibition.....Toronto, 1879
First Prize, Industrial Exhibition.....Toronto, 1880
International Medal, Centennial Ex.....Philadelphia, 1876

None genuine unless with a STAR on the head of rivets. Send for Price Lists and Discounts. b16

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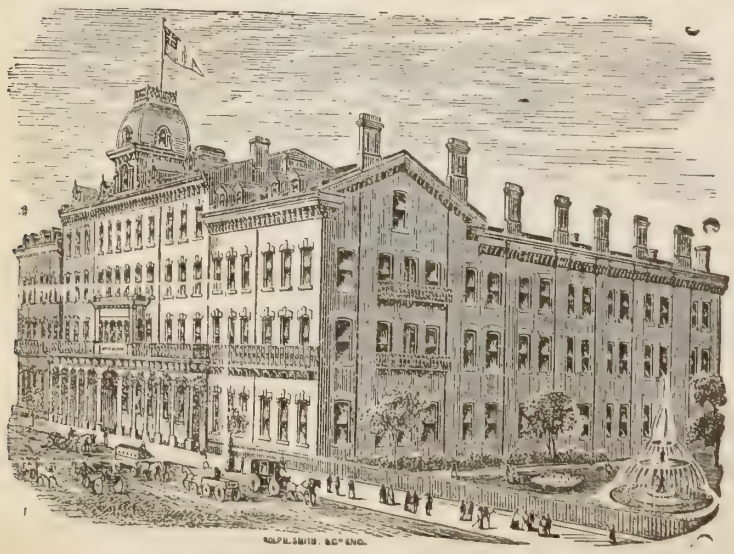

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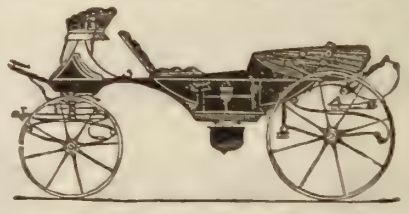
No. 17, ALICE STREET, TORONTO.

J. P. SULLIVAN,

(Successor to the late JOHN WEBSTER)

MANUFACTURER *OF FIRST-CLASS* CARRIAGES  WAGGONS AND SLEIGHS.

In the latest style. Superior material used in all branches. All work warranted for one year.

☞*All Orders Promptly attended to. Special Attention paid to Repairing.*

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Newly and elegantly furnished throughout. Contains one hundred rooms, and under it the new management is first-class in all its appointments, at moderate rates.
Free omnibuses to and from all trains.
O. T. ATWOOD, of New York, and W. R. BINGHAM, of Bradford, Ont., Proprietors. b20

THE CANADA LUMBERMAN

AND MILLERS' MANUFACTURERS AND MINERS GAZETTE.

PUBLISHED SEMI-MONTHLY.

The only Newspaper devoted to the Lumber and Timber Industries published in Canada.

SUBSCRIPTION $2.00 PER ANNUM

VOL. 1. PETERBOROUGH, ONT., APRIL 15, 1881. NO. 12.

FORESTRY AND ARBORICULTURE.

BEING THE FOURTH CHAPTER OF THE REPORT OF THE ONTARIO AGRICULTURAL COMMISSION.

Economic Uses of Woods.

While pine has, in everybody's mind, a certain recognized market value, other woods are often regarded, or at all events treated, as though they were all but worthless, or, if marketed, handled and disposed of with little practical intelligence. Since the sittings for taking oral evidence closed, the Commissioners —impressed with the importance of the subject —have put themselves in communication with Messrs. John Oliver & Co., of Toronto, a firm referred to by Mr. Hay in his evidence as large dealers in hardwood lumber. Messrs. Oliver & Co. have been good enough to supply the Commissioners with a considerable amount of additional information, and their statement will be referred to in the Report.

The value of timber in an economical sense, must of course depend on the purposes to which its several varieties can be profitably adapted. The principal uses, in general terms, of Canadian forest woods, exclusive of pine, are as follows :—

THE ELM.—"Rock Elm," says Mr. Hay, "we don't use except for building purposes. Soft elm makes a better seat for chairs than basswood." Carriage making, heads of barrels, and hubs of waggons, and agricultural implements, are also mentioned as utilizing elm in considerable quantities. Other classes of elm are in limited demand, but chiefly used for the manufacture of common furniture.

THE ASH.—Of the white ash Mr. Hay says: "White ash is a very valuable wood, and makes excellent bedroom furniture. It may be used for house fittings. A good many offices are now fitted up with hardwood, and also railway carriages. Ash is used largely by carriage builders. There is no wood will stand like ash in that respect ; it is next to mahogany. It is a shame to see our valuable wood cut down and wasted as it is and has been."

The ash is now being used to a very considerable extent in the construction of the interiors of railway passenger cars. Bent stuff for tools, agricultural implements, hay-forks, hoe and broom handles are also manufactured from ash. The use of ash, for the internal fittings of buildings, alluded to by Mr. Hay, as practicable, has according to some other reports been pretty extensively adopted. Mr. Beadle, referring to his own experience, says :—

"When building my own house I found I could obtain chestnut and ash wood as cheap as, or cheaper than first-class pine, and I used them. I think they are much more handsome than painted wood work."

Black Ash is more plentiful, but its uses are limited.

THE MAPLE.—Mr. Hay says of the use of maple in his business (furniture manufacturing): "You can get any quantity of the hard maple, but it is the soft maple that is the most valuable. It is the more valuable for furniture as it stands better and does not warp. Soft maple is not so plentiful as hard."

In the United Counties, soft maple is sometimes used for house-flooring ; it is also in some demand by agricultural implement manufacturers.

Mr. W. C. Caldwell, M.P.P., of Lanark Village, says :—"Hard maple is used for waggon axletrees, as well as several other purposes. I had an order for some from Manitoba, but could not supply it in time." Maple has also, according to one report, been used for paper pulp making.

THE OAK.—Oak is used for a variety of purposes, the manufacture of barrel staves being one of the largest causes of demand for this wood. It is also used to a considerable extent in agricultural implement manufactories, and for ship-building. "Of oak" (say Messrs. Oliver & Co.) "there are considerable varieties —white, red, grey, and blue. The former is the most valuable. It is found in several parts of the Province, principally in the North and West. A large quantity of it is made into square timber for export." Mr. Dempsey mentions in his evidence that the Grand Trunk Company got a good deal of white oak from his section (Prince Edward County), for the purpose of making railway cars. Ties are also made of oak, where the wood is sufficiently plentiful. Mr. Hay objects to oak because it is hard to work, and "warps like the mischief," nevertheless it is not unfrequently used for furniture.

The firm of Bennett Bros., of London, manufacturers of church and school furniture, writes as follows with regard to the use of oak :—

"It was stated that oak is unfit for furniture. If white oak was meant this was correct ; but white oak is valuable for many other purposes, namely staves, bent ware, and carriage work ; but it is, and has been, so valuable, that it is nearly as scarce as walnut in this country, and will soon have to be imported in the same manner as walnut.

"There are, however, other varieties of oak, black or red, and yellow, of which there are large quantities in all parts of the country, both of which are well adapted for furniture, being straight in the grain and not liable to warp or change its shape, besides being easily wrought, and when finished, there is no wood to equal it in appearance except walnut, and perhaps some varieties of white ash.

"We might state that we use it entirely in church furniture and school work, and it is to be regretted that so much of what is destined to become a valuable wood is being destroyed through ignorance.

"As you are probably aware, fashions change in wood like in everything else. Twenty-five years ago it was all mahogany and oak, then walnut ; at the present it is imitation of ebony, mahogany coming in, with a prospect of oak to follow, in which case oak will become a valuable wood."

THE CHESTNUT.—Of this wood Messrs. Oliver & Co. say :—

"This wood is now almost extinct, and what remains is confined to the same limits in the Province as is walnut. Its principal use is in the finishing of churches, also public and private offices."

THE POPLAR.—A considerable demand has sprung up for poplar, the wood of which is used for making paper pulp. In the Niagara district, and in Prince Edward County, as well as elsewhere, it has been eagerly secured at from $3 to $4 per cord for that purpose. The demand for poplar for this branch of industry is likely to increase rather than diminish. Poplar is also used to manufacture charcoal for smelting purposes.

THE BIRCH.—In view of the rapid disappearance of the walnut, the black birch will be the alternative with furniture-makers. Mr. Hay says with regart to this wood :—

"Black birch will be the only wood you can fall back on in a few years. In the north there is a great deal of it. It is an excellent wood. At present it is not dear because it is not scarce.

"You can get any quantity of it north, and it can be purchased at the mill readily at from $15 to $16 a thousand. Black birch is to be found in all the northern regions. There is a great deal in the Manitoulin Islands, and in the Peterborough and Haliburton district. It is to be found also in Muskoka. They have been shipping birch from Lower Canada these many years back. It is quite an article of export there. Black birch is mixed with the different woods of the country in large quantities. It is very easily detected among other trees. I don't use so very much of it now, but it is on birch we shall have to fall back after the walnut is gone. It is from birch that these perforated chair-bottoms are made. I think there is such a thing as bird's-eye birch, but it is very scarce. I wouldn't give more for that kind of birch than plain wood."

Messrs. Oliver & Co. say of the birch :—

"This wood is found in nearly every part of the Province. It is a very fine wood, and although the demand for it is yet very small, there is little doubt but that, in a few years, it will be largely in request for the uses to which cherry, butternut and walnut are now put. It should be husbanded with the greatest care."

THE BEECH.—Beech has no standing in the market except for fire-wood.

THE BASSWOOD.—Basswood, like poplar, is in good demand for paper-making purposes. Mr. Caldwell, M.P.P., also refers to it as used for furniture, and for boxes in starch factories. All that can be got is shipped to Oswego. Mr. Hay uses it for furniture. It can be used in some cases in place of pine, and is cheaper than clear pine. Mr. Beall says :—

"Basswood, until lately, has been largely used for buggy making, but it is not so much used since the introduction of bent wood for the bodies of buggies."

THE WHITEWOOD OR TULIP TREE.—The whitewood or tulip, which grows exclusively in the warmer sections of the Province. is used largely by carriage-makers in constructing the bodies of carriages. Messrs. Oliver & Co. say, about the whitewood :—

"A few years ago there was a large quantity of this wood growing in the western part of the Province, but owing to the great demand for it, it is being rapidly consumed, and is now very scarce. It meets a ready sale at good prices. Its principal uses are for car and carriage building, and in the manufacture of furniture."

THE WILD CHERRY.—A large demand for this wood has sprung up, chiefly in the United States. Mr. Hay says of it :—

"In supplying the place of walnut, cherry is a very valuable wood. They are using it very extensively in the United States, making ebonized furniture from it. It has a very close grain, and it is very fast disappearing. I am speaking of wild cherry. That tree grows to a fair size. We get some lumber twenty and twenty-two inches broad from it. I never saw a cherry tree growing. so that I can't say how much lumber there would be in one. I can't say whether they are high or not, but some of them grow to nearly the same girth as walnut.

"The wild cherry forms a resource to fall back upon in the absence of walnut, but it, too, is fast disappearing. We are exporting wild cherry largely to the United States, where black furniture is very fashionable, and cherry lumber takes the best stain. I think it is as enduring as walnut."

Cherry wood is also being used largely in the internal fittings of cars and public buildings.

THE WALNUT.—The Black Walnut, so far as it exists, is the staple article in demand for cabinet work of all kinds. Mr. Hay thus refers to this wood :—

"When I first came to this country there was very little walnut used, but one or two years afterwards it came to be used more extensively. I think it was Sir Peregrine Maitland who first introduced walnut here, and who was the first to make it fashionable. Previous to that, they had used cherry, or any of the common woods. Since its first introduction, walnut has been the staple fashionable wood for making furniture.

"When we first commenced making walnut furniture we got the wood from Canada West.

A great deal came from about Port Stanley and the banks of the Thames, in Kent, Essex,

and South Middlesex. We now obtain very little walnut indeed from that part of the country.

"Lately we have been getting our principal supplies of walnut from Indiana. The walnut grown in that State is as good as that grown in Canada, but as you go south of Indiana the walnut is of a lighter shade. The dark walnut grows best in a climate such as that of Michigan or Canada. I don't suppose the supply in Indiana is inexhaustible. I have been told, in fact, it will not last a great many years.

"When I came to Canada first they used walnut for rail fences. The principal value of walnut is that it is an excellent wood for furniture, and is handsome in appearance. It is universally admired, has a close grain, is not liable to be much affected by changes of temperature, and at the same time it is not hard to work. It is a very valuable timber economically.

"I couldn't say exactly what time it would take for a walnut tree to grow to matarity, fifty or sixty years at least. I don't know any other part of Canada where walnut is to be found except the district I have mentioned. There was a little once in the Niagara district, but that has been cut down. There is none at all north of us. I don't think any careful examination has ever been made of the walnut region to ascertain how much of the wood may still be remaining ; but I am sure there can only be very little left. I have never appointed an agent for that purpose. Walnut is admitted free of duty into Canada ; it would be a desirable thing to replant walnut. There would be a great market for it."

Black walnut is being used in the manufacture of sewing machines, organs, and car building, as well as for the purposes already mentioned.

THE BUTTERNUT.—The Butternut is mentioned as being used in many cases as a substitute for walnut for cabinet work, since the latter has become scarce. Mr. Hay does not, however, utilize it to a large extent in his business. He says :—"Besides cherry, butternut is a useful wood. Some call it white walnut. We do not get a great deal of butternut, as we cannot use it much for furniture. It is not a substitute for the black walnut. Some houses inside are fitted up with it." Butternut is excellent wood for veneering, and also used in finishing the interior of churches and other public buildings, and in the manufacture of cigar boxes.

THE HICKORY.—Hickory is in demand from very early stages of its existence, to the time of mature growth. Mr. Beadle says, in connection with this wood :—

"One of the greatest pests we have in our country is the axe-helve hunter. When a hickory tree gets to be six inches in diameter he will offer the farmer so much for it that he is induced to sell it."

For handles for tools, hickory is in perpetual request. The spokes and finer parts of carriages, are also made of hickory.

SYCAMORE.—Of the Sycamore, Messrs. Oliver & Co. say :—

"This wood is grown entirely in the western part of the Province, and being scarce is in good demand. It is not much used in Canada, and what there is, is principally manufactured into tobacco boxes. Owing to the high prices to be paid for it ; soft elm and basswood are being used as substitutes."

THE CEDAR, HEMLOCK, TAMARACK.—There is a constant demand for these woods, or one or other of them, for rails, posts, railway ties, and many other purposes. Hemlock bark is also largely in request by tanners for tanning hides.

The following quantities of square timber is expected to be transported over the Toronto, Grey and Bruce Railway this season :—

Cook Bros.	160,000	cubic feet.
Burton Bros.	160,000	"
McArthur Bros.	100,000	"
Flatt & Bradley	50,000	"
J. Lattimer	40,000	"
J. Stinson	30,000	"
Total	540,000	cubic feet.

HAGYARD'S PECTORAL BALSAM is composed of the most healing balsams and gums. The balsams, which enter into its composition, were used by the natives when America was first discovered, and are combined with other vegetable tonics, so blended together, that it is a specific for all affections of the throat and lungs. Thousands of bottles are used annually, and is considered one of the standard preparations of the day.

SPRING PRICES FOR LUMBER.

It is one of the peculiar features of this season's business that there has been no weakness of moment displayed in any of the northwestern markets. Generally, as the winter draws to a close and the time approaches for navigation to open, an operator here and there will begin to get nervous, and possibly shade his figures a trifle. This sort of thing being contagious, it spreads rapidly from yard to yard, and from market to market, until the whole lumber-selling district is filled with dealers who are more intent upon making prices that shall be as low as their neighbor's, or lower, than they are upon getting a profit on their lumber or even getting back the money invested in it. It is customary, in fact, for lumbermen to have a terrible time with prices from about the first of April to the middle of July. What with the discounts attributable to moving yards, the weakening effect of the early arrivals from the manufacturing points, and the general competition that comes with the opening up of business, the spring months are usually turned into a season for cut prices, which everybody deplores and helps to make at the same time. This rule seems to have operated without regard to the kind of trade that the lumber dealers looked forward to. It may be remembered that the prospect for business a year ago at this time was remarkably fine ; it may also occur to most of our readers that notwithstanding the activity with which business started up at the opening, and the apparently bright prospect ahead, the middle of May, and indeed an earlier date, found prices in a sad condition of demoralization. They will probably be able, without much effort, to recall two further facts : first, that the decline in prices was followed very quickly by a marked decrease in the volume of trade, acd secondly, that the business continued to average less than in the previous year until, some time in July, prices were again advanced and their former firmness re-established. Last year, in this respect, was simply a copy of the year before, that of the last previous one, and so on for a half dozen or more, before which time, we believe, the custom of breaking up the spring trade and taking all the profit out of it by an indefensible cutting of the current prices, was not so generally recognized as to become binding upon the trade.

The question that arises just now is whether the trade proposes this spring to follow the groove cut for it in the days when business was poor and depression and financial disaster the rule, or is to mark out for itself a new road and travel steadfastly in it through this trying season. That there is some disposition on the part of the present holders of lumber to take the latter course, the *Lumberman* feels justified in assuring its readers, the conclusion being supported both by the statements made by a number of Chicago dealers—who are generally in the foremost rank when any cutting is going on—and by the similar statements that reach it through the medium of correspondence from lumbermen in all parts of the Northwest. In one of the trade meetings in this city not very long ago, one large dealer, who is known to be pretty well supplied with stock, declared his disbelief in the theory that prices must fall in the spring, and his views were generally approved by those present ; while from competing points we have only to refer to the correspondence that appears in the columns of this paper from week to week—evidence that is abundantly supported by private advices from the operators themselves—to show that the general feeling outside is favorable to a continuation of the present firmness and the present remunerative prices.

As an abstract proposition, it would hardly seem that there could be two opinions about this matter. The lumber that is now offering, and that which will be sold during the next three months, was mostly bought in the latter part of last season, at a time when it was pretty nearly at the top of the market. There has been added to this price the cost of piling, insurance, interest, and the regular proportion per thousand feet that all lumber must bear of the current expenses of the yard, such as rent, labor in handling and selling, etc., these items in the aggregate probably bringing the net cost of the lumber, as it now stsnds in pile, up to a point that is only enough below the quoted prices to admit of a fair profit on the investment and risk. This lumber, costing within a small sum of what it brings, is wanted, as near as can be found out, by consumers. Retail dealers are already buying freely, and there is every indication that there will be an ample demand for every foot of stuff that is now drying, probably before it can be as thoroughly seasoned as it ought to be for shipping. Can any one, as a matter of fact, see in such circumstances as these any reason for suffering prices to decline as they did last spring, and as they have done spring after spring heretofore ? If there is any such reason, it must lurk in a very obscure corner, for the *Lumberman*, though it has searched dilligently, has failed to find it. To a disinterested person it seems like a perfectly plain matter, about which argument is the most unnecessary thing imaginable, and any other conclusion than that no real occasion exists for cutting prices this spring seems unwarranted and altogether unreasonable.

There are twenty reasons why prices should be held up, to every one that may be brought forward to bear out the notion that they should go down. One of these reasons is a particularly strong one, and one that should have great weight with all members of the trade. If there are any dealers who may be tempted to shade a little here and there in getting out a new list, the *Lumberman* would ask them to pause a moment and consider what will be the effect of such action. Will it be apt to bring to their yard more orders, and will they realize from it the nimble sixpence that is said to be better than the slower shilling ? The facts will hardly bear out any such theory. If anybody thinks that the true way to stir up trade is to make a cut in prices, he should study the history of his business a little. In April, 1880, the lumber dealers in this market indulged in the costly luxury of cut lists, and what was the result ? Simply that the shipments from this market for the first half of the year showed a falling off of something like five per cent., and this, when at the beginning of April they exhibited a gain of an equal percentage, thus proving that the cut in prices, which was made for the purpose of improving the business in point of volume, actually reduced the amount of it to such a degree that it did not even keep up to that of the previous year, which, as everybody knows, was not thought to be a very active season.

If this is not satisfying proof, the proposition may be reasoned out, and the same conclusion arrived at. Let us inquire for a moment how a cut in prices acts upon a buyer. Does it have the effect to make him anxious to get hold of all the lumber he can, and induce him to send to market large orders by the earliest mail? Generally speaking, no. When he gets news of a cut in prices, he quietly curls himself up in his chair and soliloquizes something after this fashion : "That's just about what I expected. All this talk that the drummers have been getting off about prices being firm and likely to go up, and about there only being logs enough to supply the demand, is all taffy ; there's going to be lots of lumber, and lumber is going down still more. Now, wouldn't I be a fool to buy any lumber now, when I am almost sure to get it from 50 cents to $2 less two or three weeks hence ? No, thank you ; I'll wait a bit." Whereupon he returns meditatively to his private office, and carefully depositing the fragments of a partly written order for lumber in the waste basket, turns with a bland smile to a customer who has just come in, with the remark : "It is impossible for me to fill your bill, Mr. Smith, for two or three weeks. I think you better put off building until after you get through planting. I may be able to shade the price a trifle then." This sort of thing among the retailers of course tends to make the cutter of price lists and the advocate of low prices happy, because it brings him such an enormous trade and such marvelous profits !

We might multiply arguments indefinitely, and adduce facts without number, to show the fallacy of the reasoning employed to prove that prices should be reduced at this season of the year ; but we shall not do it, because it appears unnecessary. The present tendency at the chief distributing points is not in the direction of a decline, and we think there is warrant for the belief that it will not take that direction. The spring will probably be a peculiar one, and its peculiarities will be of a kind that tend to strengthen the market. For one thing, the opening will be late, which will put off much longer than usual the arrival of fresh stock. Assortments, too, must continue to be very much broken, and the difficulty in filling orders consequent upon this circumstance will make the lumbermen more anxious to get full value for what they do fill, and give them less time to worry over the possible chance that the yard on the opposite side of the way may have received one or two more orders than they did in the last mail. The trade that will undoubtedly set in, if it is not disturbed, as soon as good weather gets the upper hand again, will also stimulate prices to some extent, and, when it gets fairly started, help to make them firmer by showing the dealers that the business is really there and coming to the front just as fast as it can. That the business is there, and that the dealers will get it, if they are sensible enough not to frighten it away with low prices, the *Lumberman* has not a doubt, and consequently it is equally certain that the price list will need no further revision in the direction of lower figures this spring.

If the indications by which lumbermen judge of the future are worth anything, they point very plainly to the fact that there will be a demand heavy enough this spring to use up about all the dry lumber the dealers can get their hands on, and to sell this stock they have carried all winter, and that they paid a high price for when they bought it, for less than it is worth, would seem to any ordinary constituted intellect an act of supreme folly. The *Lumberman* cannot believe the representatives of the trade, who have this matter under their control, can be guilty of such a piece of foolishness, and it has therefore high hopes of recording, as the present year goes by, a business in lumber that will make the biggest booms of other years seem small by comparison.—*Northwestern Lumberman.*

LAKE INSURANCE.

The Buffalo *Courier* says :—The insurance companies engaged in marine underwriting on the lakes have finally come to an agreement as to a schedule of rates for hull risks for the ensuing season. The rates published have been formally adopted by all of these companies, without reservation. On an average they are about one and a half cents higher than those of last year, which, as is well known, was exceedingly disastrous to lake underwriters. At present there seems to be a strong unanimity of feeling among the representatives of the companies interested in this important subject, and experience has shown that it is for the interest of them all to work together throughout the season on a mutual basis :—

ON STEAM AND SAIL VESSELS.

Class.	*Season.*	*Year.*	*Average.*
A 1	5	5½	5
A 1½	5	5½	5
A 2	5½	6	6
A 2½	6	6½	7
B 1	7½	8	8

Season ends November 30.

ON TUGS.

	Lake Privilege.		*Wrecking Privilege.*		
Class.	*Season.*	*Year.*	*Season.*	*Year.*	*Av*
A1	4	4½	5	5½	6
A1½	4	5½	6	5½	5
A2	4	5½	5	5½	6
A2½	5	5½	6	6½	7
B1	6	6½	7	7	8

Season ends December 10.

Risks attaching on or after May 1st subject to a deduction of ten per cent. from the above rates.

LIMITS OF INSURANCE.

No valuation to be less than eighty per cent. of the value expressed in the Register.

On vessels valued in policy at—

$10,000 or less	3-4ths
$20,000 or less	4-5ths
$30,000 or less	5-6ths
$40,000 or less	6-7ths
$50,000 or less	7-8ths
Over $5,000	9-10ths

CLASSIFICATION.

The Inland Lloyds classification register of 1881 to be the basis as to class and valuation.

COWAL.—Thomas C. Lipsey, of Cowal, Dunwich, Elgin Co., will cut at his mill this season over 600,000 feet of hardwood.

HAMILTON'S FOUNDRY AND MACHINE SHOP, PETERBOROUGH.

SAW MILL WORK A SPECIALTY—A NEW CIRCULAR MILL—COVEL'S SAW SHARPENER—VERY LARGE STEAM HAMMER—A BUSY SEASON.

The large foundry and machine shop of Mr. W. Hamilton is known to every resident of the Town of Peterborough, and to many living at a considerable distance. It has for years been looked on as one of its leading industries, and judging from present appearances it is bound to keep a place in the front rank. The name of Mr. W. Hamilton as a first rate manufacturer in his own particular class of work, is now fully established from one end of the Dominion to the other, and it is not by any means unknown across the border, as many of the American firms, with which he has come in contact in the matter of tendering, can testify, to their cost. He makes a specialty of mill work of all kinds, more particularly that used in sawmills, and furnishes such institutions throughout from top to bottom. As is well known, Mr. Hamilton does not turn out any trashy work, but instead, everything, no matter how small or large it may be, has to pass the minutest inspection by practical men before it leaves the establishment, and thus customers are assured of obtainiug the very best article that can be manufactured by men thoroughly skilled in their business.

A VISIT TO THE FOUNDRY.

The first glimpse of the premises betokened business, boilers complete and half finished, as well as numerous other heavy articles were to be seen on the road infront of the premises, and the number of men engaged in putting in raw material and taking out finely finished machinery ready to place in position, gave the neighborhood a business-like air. Passing inside, through the door of the machine shop, we found ourselves surrounded on all sides by workmen busily engaged at their various occupations, and were almost deafened by the the increased din and clatter of the various machines, which were all in full operation. Mr. Hamilton informed us that busines is booming without any doubt. Every department was engaged to its fullest capacity, and still they found it very difficult to keep up with their orders. Being very busy himself, he introduced us to Mr. W. H. Trout, the draughtsman and the chief designer of the works, who kindly consented to show us through this "hive of industry."

SOMETHING NEW AND UNIQUE.

Mr. Trout was busily engaged in the drawings of a new circular saw for Messrs. Irwin & Boyd for the Nassau mills. It is of a wholly new design, made from entirely new patterns, drawings, etc., and is calculated to meet every present and even the probable future wants of the lumbermen. It is a very heavy, powerful mill driven by a 20 inch belt, running on a 33 inch mandrel pulley. The mandrel is 4½ inches in diameter and nearly eight feet long. The frame or husk is 6x9 feet. All the pulleys are extra heavy with solid web and are perfectly balanced. The racks and pinions for the carriage are cut from solid cast steel. New improvements are claimed for the set works, giving greater exactness and convenience. The quick reversal of a heavy carriage and heavy machinery, or a quick change from feed to gig, or gig to feed is probably the foremost problem in the mechanics of circular mills. An automatic brake which plays it part at the proper moment, offers to accomplish this most effectively. One movement of a convenient lever sets all the dogs. The saw is set in line without changing its relation to the carriage or any other portion of the machinery, as it is all self-contained, the main belt for tightening the pulley not excepted. This performs double duty; besides serving its proper office it drives the gig. The carriage is operated by a 1¼ hemp rope. With suitable gearing it may be worked by a wire rope, or the ordinary rack stick and pinion, or in steam mills by the steam feed. We understand that a patent has been applied for, covering all the improvements, and have no doubt that it will be granted. Practical men who have examined this mill all agree that it is the mill of the future. Before commencing our inspection of the various shops, Mr. Trout furnished us with some information as to their business.

SOME GENERAL FACTS.

Work has never been as plentiful since 1872, in which year there was a great run, but still not as much as at the present time. The work turned out now is far superior in every respect to that which was turned out eight years ago, for the simple reason that the mill men will not look at work now that they would jump at then. The prospects for the continuance of the flow of work are brighter than ever they were and the future outlook is excellent. Mr. Hamilton has refused some heavy contracts, for which he had the first chance, on account of not being able to turn out the work in the specified time. Several offers of work from Manitoba have also been refused as he prefers to handle work nearer home, when there is enough of it to keep all employed, as is the case at the present time. The capacity of the shop is limited and we are told that is is proposed to extend the premises shortly, in fact the necessity for such a step is very apparent, and will be more so before long. The wages of the employees have been recently increased all round and even at the enhanced figures, it is a very difficult thing to secure competent men, a rather different state of things from a few years since, when first-class men could be obtained on all sides at a considerably lower figure than is now paid. As we said before, Mr. Hamilton's specialty is mill-work, particularly that for saw-mills. For this class he has the "run" for Ontario and does the bulk of the work. Nearly all of the large lumber manufacturing firms deal here and many of the smaller ones, although the greater portion of the work required for the latter can be done at nearly every foundry throughout the country.

WORK ON HAND AND RECENTLY DONE.

All the machinery required for the large elevator, now being erected by the Midland Railway, is being made at the present time. The engine is of the latest improved Corliss pattern and is of 120 horse-power. The boiler, a return tubular, is 5½x14 feet. Besides the engine and boiler there is all the shafting, pulleys, etc., of which a large number will be required. There is also in course of construction a circular mill for Mr. Tait, of Gravenhurst, who was recently burned out; a circular mill and all the etceteras for Messrs. Williams and Murray, of Blind River, Georgian Bay; two gang mills for Gilmour, of Trenton; Ross & Co., of Buckingham, Quebec; and similar machines for at least a dozen other firms; two dozen of Covel's patent saw sharpeners, (which are manufactured by this firm under the Canadian patent, and are rapidly winning their way into public favor), besides complete outfits or repairs of some kind for nearly every mill in this district. So busy have they been in filling orders that Mr. Trout has been kept steadily employed since the beginning of the present year in draughting patterns for the work.

THE PATTERN SHOP.

In the pattern shop in the second story of the main building over the machine shop. We found eight men at work, with Mr. W. McLean as foreman. All the patterns are made here, and such wooden work as is required on the various machines. There is not much wood work to do as iron is chiefly used in the construction of all the various patterns of the machinery which is made. Cogging wheels and making frames for sawmill carriages, and putting together frames generally appears to be the principal work. Several of the men were engaged in making windlasses for towing sawlogs and rafts of timber on the lakes. The machinery in operation consisted of two planing machines, and numerous saws.

THE MACHINE SHOP.

We next entered the machine shop, under the charge of Mr. Geo. Munro. Here everything was in activity. Every person was busy and worked as if they knew that there was lots to follow. Immediately in the rear of the machine shop is the blacksmith shop, where six men were working at their forges under the watchful eye of Mr, John Fraser. The machine shop is literally "chocked full" of shaping and slotting machines, planers, emery wheels, and the thousand and one large and small machines which are known to the mechanic. It looks as though it would be an impossibility to crowd any more men or machines into this room, and as things are at present it could not be done, but we are told that by a re-distribution, which it is proposed to make at an early day, if the premises are not extended in the meantime, one-third more men and machines can be accommodated. The hands here are utterably incapable to keep up with the press of work, but in order to accomplish as much as possible they work until ten o'clock every night. There is in this room a steam hammer which is worthy of special mention. There is nothing like it to be seen outside of the cities, and large cities at that. Toronto cannot even boast of one, and of course Mr. Munro feels proud. This feature alone distinguishes this establishment from all others of a similar character in the Province. It can be used for forging both heavy and light work, in fact anything from a monster anchor down. It will work with any amount of force from a few pounds to several tons. The possession of this hammer is a great advantage, as formerly all heavy work had to be sent from Peterborough to Buffalo in order to be forged, but now it can all be done at home and a large amount of time and money saved. Some of the workmen were engaged in putting the finishing touches to the large span circular mill for the Messrs. Gilmour of Trenton. The machine is thirty feet long and is operated by a steam cylinder. The logs are cut the same on both sides, slabs and boards being taken off in any desired number, and the stock left any size wished for, according to the diameter of the log. The log is held on at one end only by a massive iron dog, which is an entirely new feature, and one that cannot help but please. The idea is a new one and originated in this shop. This is only the second mill of this kind that has been turned out; the first one has been in operation in Mr. Buck's mill at Port Severn during the last season, and that gentleman says it is the most satisfactory he has ever had in any of his mills. Coming from a gentleman of such great experience of Mr. Buck, this statement has naturally has a good effect, and Mr. Hamilton expects to have a large run on these machines during the present year.

THE MOULDING SHOP.

Having viewed the machine shop thoroughly, we next proceeded to the moulding shop, where Mr. Thos. Tucker is looked up to. This is by long odds the quietest room in the whole foundry, but noise is not necessary here—although dust appears to be—to carry on operations. The men were engaged in doing only general work necessary for the contracts. In a large oven are dried the cores and special moulds, which are sent in and taken out on a small car which runs on rails. Iron casting is carried on every alternate day, and brass casting at irregular intervals, just whenever required. The heaviest cast made is about four tons, although, should occasion require it, they can cast as high as five tons. To an ordinary observer not acquainted with the work going on, this is the least interesting room in the building, and that fact combined with the dust which was floating around thick, made us take a hasty departure to

THE BOILER SHOP.

Things are quiet enough here except when riveting is going on, and then any person who is fond of noise should just drop around and listen for a short time. Boilers for the Midland elevator and half a dozen other places were in process of construction. As a general thing many of the boiler makers are employed at outside work, and it is a rare thing to find the whole staff in the room. In this branch Mr. Hamilton has had more competition than in any other department of the business. Some large firms do nothing else but manufacture boilers, but notwithstanding this fact, good work always tells, and as the majority of people prefer a first-class article, Mr. Hamilton's boiler shop is kept busy all the time. Here are large hoists, cranes, etc., for moving the heavy work and loading it on waggons, by which all the machinery made has to be drawn to the railway stations. When the "missing link" is constructed, it is expected to pass close to the foundry and will thus remove one great obstacle and greatly facilitate shipment.—*Review.*

The circulation of the CANADA LUMBERMAN is over 2,000 copies. Advertisers should note this

MINDEN.

JOBBERS.—The Bobcaygeon *Independent* s[ays]: We have had a very busy time here all winter, and one of great prosperity to both settlers and store keepers. The lumbering has arrived at a point when there are not so ma[ny] and many more jobbers. It is not the [pro]fitable to the country. In fact it [is] able, for the money goes more directly [into] hands of the settlers. A settler [cuts] logs, and sells them to the lumberman, makes all that can be made by the operat[or], [and more] than would be the case if the lumberman run a shanty and took them out with his o[wn] men. One operator, who manges the [business] for a Bank, paid over nine thousand dollars this season to settlers for logs they got out, and others in proportion. But the feature of the season has been the large quantities of [wood] produce taken out other than pine logs and squared timber. The Victoria Railway will carry not less than a hundred thousand railway ties, twenty thousand telegraph poles, and so many posts, and so much cord wood, that no estimate can yet be accurately made. The ties bring 14 cents each, the poles about 30cts. each. Thus $14,000 will go to the settlers for ties, and $6,000 for poles. This $20,000 goes into the pockets of the settlers, and is just so much gained as a result of the railway being opened. The ties, in another year or two, will attain a value of twenty cents each, and then it will be a good business. I should think that not less than $20,000 will be paid to the settlers for posts and cord wood, and thus forty thousand dollars will be gained to this country, this year, by the construction of the railway,—which cost the country altogether only $55,000 of bonus.

UXBRIDGE CAR WORKS.

The car works of the Toronto & Nipissing Railway are situate in Uxbridge, and form one of the most complete establishments of the kind in Canada, although not by any means the largest. There is now on the stocks almost completed a first-class passenger coach, which will be finished equal to any on the continent. The inside will be of walnut facing, with Hungarian ash panels. The coach is 57 feet in length over all, 8 feet 10 inches wide outside, and will contain 32 double seats. The framework is strengthened by upright iron stanchions, and triangular iron braces, which, from their peculiar construction, support the carriage from each end. The roof has 10 iron rafters, connected with ribs fastened to the floor, giving great strength combined with lightness. Several new cattle cars are also under way. They are 30 feet long, 8 feet 10 inches wide, by 6 feet 2 inches high, clear of roof, giving ample room for stock. The cars, although to be used on the narrow gauge, are of dimensions suitable for the standard width, should the railway company at any time decide to widen the gauge. The rolling stock of the company is kept in excellent order, and under the management of Mr. Joseph Haggas, mechanical superintendent, keeps improving. The locomotive department turns out first-class work—amongst which may be mentioned a speciality, viz.: "the Haggas Water Elevator," an ingenious contrivance for supplying locomotives with water from underground tanks along the line. It is worked by a suction pipe connected with the engine, which, by forming a vacuum, draws the requisite supply of of water into the tender in a very short time. This apparatus is adopted by the Midland and other railways, and is found to work well. It does away with elevated tanks and pumps, and is safer from frost during winter. Mr. C. E. Caron is in charge of the wood department, as master car builder.

IN cases of Chronic Diseases which doctors have failed to cure, BURDOCK BLOOD BITTERS has achieved its greatest triumph. All diseases of the Blood, Liver and Kidneys, Scrofula, Dyspepsia, Nervous Debility, Rheumatism, Piles, Female Complaints, and all forms of lost vitality, are promptly cured by this great renovating Tonic. Trial bottles only cost 10 cents.

"Hail Beauteous, Bounteous, Gladsome Spring"—this was Mark Twain's prize poem—but the dire diseases incident to spring, spoil the romance. Burdock Blood Bitters is the prize remedy, the remedy prized by all who have tried it as the best Blood Purifying Tonic and System Regulator in the market. It cures all Blood Humors from the worst Scrofula to a common Pimple. Sample bottles 10 cents. For sale by all dealers in medicine.

THE TIMBER SUPPLY QUESTION.

We have received the following for publication :—

SIR,—I have for several years been endavoring, through the press and in pamphlets, to draw attention to and impress on the Government and lumberers, both of Ontario and Quebec, the importance and necessity of preserving our timber resources, so as to place us in a position to take advantage of the wants and necessities of our neighbors across the line, when their supplies are exhausted, and notwithstanding I showed that that time was within a few years of its accomplishment, no heed has been given to my warnings.

Since my first introduction of the question of supply, in the United States and Canada, the Western lumber periodicals have lost no opportunity in trying to discredit my statistics on the subject. They have in the interest of the manufacturers been endeavoring to hoodwink the consumers with assertions that their timber resources were abundant to meet the demand for many years, and thus withholding them from pressing on the Government the necessity of admitting our Canadian lumber free of duty and all other obstructions to which it is liable. But the Government itself has now, it appears, taken the matter in hand, and has sent experts to the timber supplying States of Michigan, Wisconsin and Minnesota, the only ones they have from the Rocky Mountains to the Eastern Atlantic seaboard, to investigate and report on the extent of their timber resources for their forthcoming census returns, and I herewith beg to hand you a copy of the New York *Times*, of the 21st instant, containing an article on the subject, in hopes you will give it to the public through the LUMBERMAN.

It will be seen from the article referred to, that at the present rate of consumption their supply will be totally exhausted within the short period of about nine years, and when there is added to the population a yearly complement of a million and a half consumers, a number equal to the whole population of the Province of Quebec, the supply will not suffice to respond to the demand for half-a-dozen years at the outside, and in two or three years at the very farthest a total cessation of shipments to the East must take place, which will necessitate a doubling of our present manufacturing capacity to supply its place, and be the means of doubling as well the value of our wood product.

The Western Ontario papers inform us of 100 acres of pine changing hands recently at $22,000, enough to purchase half-a-dozen good farms with all their buildings and betterments, and $1,000 have been refused for ten pine trees in the Township of Puslinch. And what is the reason of this extraordinary advance in the value of such property? It simply arises from a scarcity where, a few years ago, pine on a farm lot was looked upon as an eyesore. It might surely be supposed that our lumberers would take a lesson from this—but no—the state of prosperity to which the United States have attained, occasioning an increased consumption of lumber coupled with a short supply and a consequent good demand, have had the effect of sending our lumberers into the woods with double force, to slaughter away and keep the markets glutted, and thus waste their timber and entail on themselves a double loss.

I do not hesitate or fear to assert that there is no description of commercial wood in our forests that will not in five years be worth more standing where it is, than it is to-day manufactured for market.

JAMES LITTLE.

Cote St. Antoine, Montreal, March 25th, 1881.

When on the 13th May, 1878, you published a letter, from Mr. James Little, of Montreal, on the subject of the devastation of our woodlands, you no doubt remember the incredulty with which his statements were received by those pretending to be informed on the subject ; but you have now the satisfaction of showing that the warnings then given are fully justified by the reports of the Government itself, now coming to light through the medium of the lumber journals of the West, which, I may remark, were as adverse to giving currency to the facts then as they are now urgent to have it recognized that they assisted in giving the warning.

The facts that he presented were, that of the whole twenty-six States, comprising the New England, Middle, Western, and North-Western to the Rocky Mountains, only four, namely, Maine, Michigan, Wisconsin and Minnesota, had a supply of timber in excess of their own wants, and the question was, how long the supply for commercial purposes would last the drain upon them? The white pine being the wood of prime importance, his remarks were that the supply of this timber was confined almost entirely to the three States of Michigan, Wisconsin and Minnesota, and that the demand on them was so heavy for all sections of the country, that it would not be possible for them to respond to it for more than six or seven years longer.

The *North-western Lumberman* now states, from information derived from the proper authorities, that the forthcoming report of the United States census will show that the pine timber supply of the North-West, in 1880, was in Minnesota, credited by popular estimate with 40,000,000,000, only 6,150,000,000 ; Wisconsin, from statements varied from 80,000,000,000 to 100,000,000,000, only 40,500,000,000, and Michigan, on both the upper and lower peninsulas, 35,000,000,000, making a total supply of 81,500,000,000 feet of pine timber. This paper at the same time states that the aggregate cut and destruction of pine in the three States is not far from 8,000,000,000 feet per annum, so that, if we deduct the past winter's cut, which has been an exceedingly heavy one, there remains standing to-day in the whole North-West only 73,500,000,000 feet, which is distributed about as follows, viz.:—

In Minnesota	5,500,000,000
In Wisconsin	38,000,000,000
In Michigan	30,000,000,000
Total	73,500,000,000

From the above it will be seen that even now, when only three years of the six or seven mentioned by Mr. Little have gone, these States have reached a condition when common prudence would say they had not another foot to spare. They are rapidly growing in wealth and population, and in all probability will have 6,000,000 inhabitants to supply within their own boundaries in the next ten years, so that the amount now remaining would barely supply their own wants for twenty years from to-day ; but what will be their condition in four years from this time if the continued slaughter of the pine is kept up?

In round numbers, Michigan is parting with her forests at the rate of 5,000,000,000 feet a year ; consequently at the end of four years will have only 10,000,000,000 remaining to supply her more than 2,000,000 people. Wisconsin will probably part with 13,000,000,000 during the same period, leaving her with only 25,000,000,000, and Minnesota, that has not a stock to-day one quarter sufficient for her own wants, will be reduced to 3,000,000,000, leaving only 38,000,000,000 of white pine in the whole North-West (an amount little more two years' consumption of the whole country), as the reserve supply, not only for themselves, but for the entire country. It is but trifling with the subject to speak of the few patches here and there in our own State, and in Pennsylvania, Virginia, or elsewhere.

Formerly, when the New England States parted with their pine, there remained the forests of New York, Pennsylvania and Canada to fall back on, these in their turn fell back on Michigan, but now the reserves themselves are about gone, and even Canada is forced to compete for supplies in the forests of Michigan and Wisconsin for the English market, and unless something is at once done to stop the destruction of this indispensable timber, it will be all gone, and we will have only the stumps remaining to remind us of our folly.

It is to be hoped, now that the Government has come into possession of the facts, it will take means to enlighten the public on this most important subject. An enlightened public opinion can do much to aid in stemming the tide of destruction which is now going on with reckless precipitancy. A knowledge of the value of their property will cause owners to be more careful of it and not be disposed to part with it to go abroad at one-tenth the value it will have in a few years, standing it their forests for their own wants. The substitution of spruce, hemlock and other woods for such purposes as they are suitable, by stopping the frightful butchery of this timber which is now going on by the use of circular saws, that turn one-quarter of the tree into sawdust ; by allowing the young trees to grow ; by the Government withholding its timber lands from sale ; by preventing, if possible, the making of square timber in the woods, by which one-third of the tree is cut into score blocks and shavings, furnishing the most fruitful source of fire, and by throwing open our ports to the free entry of timber from any country that may be willing to spare it—and now that this timber is about gone, if the lumber papers have at last learned to recognize the difference between a pine tree and a gooseberry bush, so as to give their patrons correct information on this important subject, some little may yet be done to prolong the supply of this indispensable timber.

WILLIAM LITTLE.

Astor House, New York, March 16th, 1881.

—*New York Times, March 21st.*

VANISHING FORESTS.

The Toronto *Mail* says that the lumber question seems to be coming, if not "within the range of practical politics," at least within the range of practical business men. A long conference on the expediency of protecting the forests was recently held in Chicago ; and it is a noticeable fact that the remarks were made chiefly by the owners of pine lands and the operators of saw-mills, who may fairly be supposed, from the nature of their business, to have a more intimate acquaintance with the present condition of our forests, and the necessity of protecting them and of replacing them as they are cut off, than those who merely sell the lumber after it is sawed. The situation in the States certainly seems to be rather startling. The N. Y. *Shipping List* lately said it had been advised that "the pine forests of Michigan will be exhausted in thirteen years, and those of Wisconsin and Minnesota in thirty and forty years." After quoting and commenting upon Mr. Little's letter, which we publish in another column, the *Mail* continues : "The census commissioners ought certainly to be expected to be well-informed and impartial men ; and if the actual situation should be as is stated it is rather a serious matter for the States. But it is equally serious for Canada. Lumber is our staple export ; if our neighbors' fields should be run out they will turn to us if we have any left. A large part of our territory seems fit for nothing else than a lumber field. This being the fact, and a demand on its resources being certain, should we not seek to turn its resources to the best account?"

Waste Paper.

A recent report of the controller of the British Stationery Office, whose function is to provide the paper used in all the government offices, states that the value of the waste paper collected from the various offices and sold for the public account averages $50,000 a year. Hitherto it has been the rule to turn the bulk of this paper over to a single firm, under bond to reduce it to pulp in the United Kingdom. Under such conditions, the price received was less than the paper was worth in open market. The paper is now sent to the state prisons, where it is sorted and torn up, so as to be rendered practically illegible, and then sold unconditionally at much better prices than before.

At first thought it might seem to be more economical to burn the paper at once, and thus save all the expense of collection and transportation ; but the controller states that the money received for waste paper in some years amounts to more than the total salaries of the controller, assistant controller, and staffs of the department in both England and Ireland.

THE CANADA LUMBERMAN.—A journal in the interest of the lumber trade, bearing the above title, which has been published in Toronto, has passed into the hands of Toker & Co., of the Peterborough REVIEW, who will publish it hereafter. Under their energetic management it will no doubt command a large share of patronage, and if the initial number is any criterion, it well deserves to. Published semi-monthly at $2 a year.—*Picton Times.*

THE FREDERICTON BOOM COMPANY.

Recognizing the impetus given to lumbering operations last fall by the favorable state of the English markets, and feeling confident that the cut on the Upper St. John and its tributaries would be in excess of previous years, the Fredericton Boom Company have made ample preparations to boom, hold and raft every stick that may float or be driven down the river this year. To do this necessitated not only the repairing of many piers in the old booms, but the providing of increased boom space. Work was commenced on January 3rd in the Gill boom, below Fredericton ; and here 15 to 20 teams, along with about fifty men, were employed till three new piers had been constructed and the damage done by the ice to six of the old piers had been repaired. A large jam pier was also erected in the Mitchell boom, likewise below Fredericton. The main operations, however, were conducted at Sugar Island, just below the mouth of the Keswick, where a new reserve boom has been located and constructed, capable of holding sixty millions and intended, in case of a big run, to relieve the Douglas and Lincoln booms to that extent. The location is admirable for the purpose, being well sheltered and having deep water throughout the season. Here the company have expended fully $5,000 in the erection of thirteen jam and block piers, which will render the boom fully able to stand all strain. All logs running down the river can be turned into this area by means of a sheer boom set at the head for this purpose. The boom was located by Stephen Glasier, Esq., agent of the boom company, who has also personally superintended the construction and repairs to the several booms this winter. Perhaps the most difficult task Mr. Glasier had to undertake was devising means to guard the ten million logs now in the Douglas boom from being carried away by the run of ice this spring ; and along with them, between four and five millions lying rafted in the wake of the boomed logs—all these logs having come down last fall too late to be got away before navigation closed. Two new piers have been built in this boom and the seventeen existing piers have each been raised about five feet, so as to prevent the ice from jamming in on top of the logs and carrying them away. It is expected that these piers will present an impassable barrier to the run of up-river ice and turn it in another direction, thus saving the logs in the boom. With respect to the five million rafted just below the boom, as the ice there is rotting rapidly, it is believed that they can be got away before the up-river ice runs down. Messrs. D. D. Glasier & Sons are keeping a sharp lookout, and by pushing their tugs up as fast as possible, taking advantage of the open creeks, expect to be able to tow these rafts down to St. John ahead of the main body of ice. While the boom company have made most extensive arrangements for the summer business, more improvements would have been made in the lower booms if the early wasting away of the ice had not prevented the lumber having been got out for the purpose. From the best information attainable, the company look forward to a run this spring and summer of about 150,000,000, and have made their arrangements accordingly. The quantity of snow now in the woods on the Aroostook and Upper St. John renders the chance of a sudden fall of water like that of last spring impossible, so it is extremely probable that most of the quantity above estimated will reach the boom this spring and early summer.—*St. John Sun.*

FOREST FIRES.

ATTLEBORO, Mass., March 28.—An extensive fire has been raging in the woods between Attleboro and Mansfield all day, extending into Wrenthan, where to-night it is burning with great fury. A large quantity of wood and timber has been destroyed, and several dwellings are threatened. A force of men are fighting the fire, which is fanned by a strong breeze.

WILKESBARRE, March 28.—Forest fires are burning furiously on the mountains near here along the line of the Lehigh and Susquehanna railroad, and are spreading rapidly to-night.

GLOUCESTER, Mass., March 28.—An extensive fire is raging in the woods between here and Rockfort, which threatens to burn a large area.

INFORMATION WANTED.

The *Globe* had the following editorial under the heading "Information Wanted Concerning Our Forest Wealth":—

"We have already remarked upon the absence of any definite information as to the extent of our pine lands and the character of the timber standing thereon. We have suggested that an official investigation be held before persons authorized to call for the statistics and other facts necessary to get an accurate idea of the revenue from timber dues hereafter to be received by the Province; to collect information upon practicable methods of forest conservation; to consider how far the very efficient German system of forestry can be introduced here; and generally to take such steps as will tend to bring about a cessation of many extremely wasteful practices on the part of lumberers and the owners of timbered lands.

"Upon a great many important points in forestry there is now a plentiful lack of information. All we know about our forests is contained in the report of the Agricultural Commission. That report is a perfect mine of information concerning the agricultural state of the townships in this Province, and so far as the Commission was concerned in the subject of forestry, its duties were exceedingly well performed. For instance, we learned from that report for the first time that, in the older part of the Province, there are only ten counties in which more than two-thirds of the land has been cleared, and only two counties in which more than three-quarters of the land has been cleared. What we want now is further information in this direction. Especially is it desirable that means be taken to diffuse among the owners of standing timber information concerning its present and prospective value. Hardwood timber, standing in any place where it can be easily won, is becoming very valuable. As respects black birch, the prospect seems to be that it will soon become the most valuable of our forest trees, so rapidly is furniture made from that wood coming into fashion. A word in time might prevent the felling for firewood of many a valuable birch, maple, or oak. It is also desirable to know how far the use of poplar in paper-making is likely to extend, and the extent of the supply of that wood standing within easy reach of the paper mills. In some parts of of New England poplar already brings $8 a cord for paper-making, and wood for those mills is taken from Canada in great quantities. It may be that only accurate information is wanted in order to compel the Yankee paper-makers to pay us a much better price than they do for their raw material. The supply of basswood, and the extent to which that wood is capable of being utilized, would be another interesting point for investigation. There might also be some practical means found of exacting fulfilment of promises made by the railway companies which asked and received aid from Canadian towns on the promise that cordwood should be brought in cheaply. It is too bad that, within a hundred miles of Toronto, and close to a railway aided liberally by the city, the clearings of new settlers should still be burnt in the old wasteful style, simply because the railway does not care to aid in reducing the supply of wood available for its own fuel. But such is the case.

"Then there is a great field for usefulness in the collection and dissemination of intelligence concerning the re-clothing with timber of thousands of acres of land which ought never to have been cleared for agricultural purposes. There is scarcely a township, and in some townships not a farm, which has not some land which could be more profitably put to growing timber than to any other purpose. Bare hillsides, too poor for orchards, might be put to use growing poplar or some other quick-growing tree, and the planter of the trees might begin to receive his money back in ten years from the first investment. Of young hickories we import hundreds of thousands yearly, from Ohio and elsewhere, that might just as well be grown at home. In some parts of the Province the black walnut might be grown at a profit. In all parts there is something more to be done with timber than is done. A very general desire is arising among the farmers to do something in the way of tree-planting. What they want is detailed and accurate information as to the best direction in which to bestow their work, and this information could best be obtained in the manner we have indicated."

MAKING IRON COLUMNS SECURE.

So many accidents have occurred at fires to life and property by the sudden giving away of iron columns used for supports to the various floors of buildings, that such colums are looked upon with distrust by firemen, and their use discouraged. When they become heated by fire they are apt to break entirely, thus letting the upper floors fall. It was in consequence of the giving away of the iron columns at the Broadway fire, some time ago, that the floors from cellar to roof fell in and two firemen who were on the roof were hurried to a terrible death in the seething furnace within the building. All large cities are full of buildings whose several floors are supported on iron columns, and, in case of fire, they are quite as likely to collapse as did the one we refer to. Our building laws, which are yet crude and imperfect, permit their use, and, as they are cheaper than most anything that could be used instead, they are still favorites with builders. The very best thing to take the place of iron columns would be columns of brick, but objection is made to them that they take up too much room and are not ornamental.

Many experiments have been tried with a view to making iron columns fireproof, or at least sufficiently so to be able to stand a small fire in their neighborhood without bending, and thus bringing the entire building to the ground in ruins, long before it would be destroyed by the fire alone. Casing the columns with wood, asbestos, brickwork, etc., has been tried, and some of the methods have been described in the *Journal*. Recently two more suggestions have been made. One is to inclose the columns in rings of terra cotta, put on over the top when the column is set up. These would act as a shield to keep off the heat till the fire could be subdued. The plan is simple and inexpensive, and has the added advantage of giving opportunity to make the columns highly ornamental, as terra cotta readily lends itself to decorative treatment.

The second plan is to fill the columns with water. To do this the plates or castings, usually placed between the columns where they stand one over the other, have holes or openings of some kind, so that there is a free communication from column to column, from the bottom to the top of the building. Where columns are already erected, short pipes are used to connect them at each floor. The uppermost column is also provided with a small escape-pipe, passing through the roof to the open air. At the base of each tier of columns a pipe is connected with the street mains, so that all the columns may be filled with water, either permanently or on emergency. When thus filled with water and provided with an escape for the expansion of the water or steam, the columns would stand unharmed until every floor was burned out. Were the girders also hollow and filled with water in the same manner, both girders and columns would undoubtedly stand intact, even after all the floors and the roof had fallen in, and they could be used again in rebuilding. The system has the merit of cheapness and ease of application, and is patented in this country. We have little confidence, however, in iron columns under the conditions incident to a great fire, and the sooner their use is prohibited by law the better it will be for the public.—*Firemen's Journal.*

A Will and a Way to Execute.

We are in receipt of THE CANADA LUMBERMAN, now transferred to the proprietorship of Toker & Co., and published semi-monthly at Peterborough, Ont. As its title indicates, it is devoted to the lumber and timber interests of the Dominion, and promises to advocate all measures tending to the advantage of the trade it represents, and to furnish full and reliable reports upon the co ndition of the Canadian market, statistics, etc. Its introductory is written as if there was a will and a way to execute behind the promises made, which must place the journal in full rank with others of its kind.—*New York Real Estate Record.*

BURLINGTON, VT., INSPECTION.

Although doing a large business in lumber the extensive market of Burlington has no systematized method of inspection. Steps are, however, in progress looking to that end, and probably before long rules and regulations regarding inspection will be adopted by the dealers in that section. While each lumberman now has an inspector of his own, a variety of customs prevail, notwithstanding an endeavor on the part of all toward uniformity.

The grades recognized in the Burlington market are as follows: Selects, Shelving, Second Shelving, Pickings, Shippers, Box, and Mill Culls.

These gradings apply to wide lumber from eight inches and upward.

Strips twelve feet long and upward are classed as 1st Quality, 2nd Quality, 3rd Quality and Box.

Under twelve feet in length the classes of seconds and thirds are combined as one, while all unfit for this grade go into a still lower grade of 3rd Quality or into a new grade of Box.

Spruce is divided into three grades, namely: Clear, No. 1 and No. 2.

Selects. Comprise the finer grades of lumber, and include all fair widths approaching to the upper grades of other markets, and suited to all the finer finishing purposes, for which the timber is adapted.

Shelving. Includes ten, twelve and fourteen-inch stock, and is classed as first and second shelving, as to relative quality and adaptability to the purpose indicated; first quality ranks about seven dollars per thousand below selects, while the second quality is from five to seven dollars below the first. In both qualities more or less knots and sap will be allowed, not affecting the board for the purpose from which it derives its name.

Pickings. A grade of lumber of any width, suited to one side finishing, embracing sap boards, and generally such lumber as while from width not fitted for shelving, is more defective than selects, yet filling a position which must otherwise be occupied by selects. As in other markets, it may be called the cream of the common. It is relatively in price about twelve dollars below selects.

Shippers. Are of diversified widths, without shake or case knots, and free from large coarse knots, comprising the best of the common after the picks are removed.

Box. Comprises a grade poorer than shippers, yet taking the run of the common, in all fairly sound and merchantable lumber. In price it is from two to three dollars below shippers.

The grades of shelving (first and second) Pickings, Shippers and Box are, one and all, selections from Common, made with reference to adaptability to the uses indicated by their designations.

Mill Culls. Are the poorest grade of lumber adapted to any utility, or recognised as merchantable, and bear the same description as the same grace in other markets.—*Lumberman's Hand-Book.*

AVERAGE WEIGHTS OF LUMBER.

The following table shows the average obtained in the actual shipment from Chicago of 20,000,000 feet of pine lumber, during an entire season:

	Pounds.
1, 1¼ and 1½-inch surfaced 1 side	2,102
The same, surfaced 2 sides	2,068
2-inch surfaced 1 side	2,200
White pine flooring, dressed and matched	1,890
Hard pine flooring	2,366
Ship lap, 8-inch	1,711
Ship lap, 10-inch	1,725
Ship lap, 12-inch	1,855
White pine, ⅝-inch ceiling	786
Hard pine, ⅝-inch ceiling	950
Siding	865
Piece stuff, rough	2,560
Piece stuff, surfaced one side and one edge	2,210
Thin clear, surfaced one side	1,380
⅝ ceiling	1,120
Rough boards	2,524
Hard pine fencing	2,910
4-inch flooring, dressed and matched	1,793
6-inch fencing	2,433
Pine shingles	248
Cedar shingles	203
Dry lath	502

LUMBERING IN MANITOBA.

The Emerson *International* of March 25th, says that James Carney, of Carney & Watson, visited the firm's logging camp up the river, near Acton, last Friday, and returned home on Monday, accompanied by his partner, Mr. Watson, who has gone to Winnipeg on business. Things are reported as booming at the camp, and a large number of oak logs are being got out. The firm expect their saw mill machinery about the 15th or 20th of April, and will rush the erection of the mill so as to commence sawing early in the season. The firm expects to handle half a million feet of logs and 30,000 feet of piles during the coming season. They propose to do their share in helping along the Emerson business boom. The boys are enterprising, and deserve to do well in their saw mill enterprise—as no doubt they will, as the farmers of Southern Manitoba have scarcely yet begun to provide themselves with comfortable barns and granaries, and will require an immense amount of lumber of the class that the Emerson steam saw mill will turn out, to say nothing of the demand for oak timber which will be made by various municipalities for bridges and culverts. By the time that trade has been satisfied the Red Lake Indian Reserve will have been opened up, and Messrs. Carney & Watson can then turn their attention to pine lumber, the logs for which will be brought down the Red Lake and Red Rivers. Emerson will then not only support one mill, but a dozen. Messrs. Carney & Watson's mill will be located on the river bank north of Park street.

THE SHIP BUILDING SEASON.

Owing to several causes, the season for ship-building has not opened with as good promise as ship-builders anticipated it would last fall. Freights at present are so low that there is little encouragement to builders to commence building yards, and if there is not an advance soon, most of the yards which are busy now will remain idle after the vessels at present building are got off. Ship timber is very dear also, and there seems to be no prospect of a fall in price, owing, it is said, to the scarceness of it. The scarceness was caused by many men who formerly were engaged in getting out ship timber going into the woods to get out logs, in view of the unusual activity in that branch of business.—*St. John, N.B., Globe.*

Hudson's Bay as a Possible Outlet for the North-west.

During the past summer the engineers of the Nelson River Railway Company have surveyed a railway route between Norway House at the outlet of Lake Winnipeg and Fort Churchill on the Hudson's Bay. The distance between these places is about three hundred and fifty miles. The surveyed route first follows the course of the Nelson River for a distance of nearly one hundred miles over a level country. The next part of the road is over a broken rocky country, where the Nelson River has a descent of nearly seven hundred feet to the lower plateau, where the country again becomes level, and continues so to Hudson's Bay. Upon entering this rocky range the surveyed route leaves the Nelson River, taking a more northerly course toward the valley of the Churchill River, which is reached at its entrance on the lower plateau, and continues to follow the course of the river to its outlet in Hudson's Bay. The estimated cost for building the road-bed is ten thousand dollars a mile on the plateau and seventeen thousand a mile through the rocky portion of the route, or an average of twelve thousand dollars per mile along the whole route.

It is claimed that by this route it will be possible to transport grain from the Saskatchewan Valley to Liverpool for less than it will cost to carry it to Montreal by the proposed railway north of Lake Superior.

Professor Bell, of the Canadian Geological Survey, who sailed from Fort York, Hudson's Bay, and passed through Hudson's Straits in the latter part of last September, says that sailing vessels have sometimes considerable difficulty and delay in getting through, but steamships can make the voyage at any time between the first of May and November, as the straits are nearly one hundred miles wide in the narrowest part, and the channel is not obstructed by ice.

Travelling Agent.

MR. A. L. W. BEGG has been appointed agent for the CANADA LUMBERMAN, and is authorized to collect subscriptions and grant receipts therefor and to make contracts for advertisements appearing in its columns.

The Canada Lumberman

DEVOTED TO THE LUMBER AND TIMBER INTERESTS OF THE DOMINION.

PUBLISHED SEMI-MONTHLY BY

TOKER & Co. PETERBOROUGH.

Terms of Subscription:

One copy, one year, in advance	$2 00
One copy, six months, in advance	1 00

Advertising Rates:

Per line, for one year	$0 90
Per line, for six months	50
Per line, for three months	30
Per line, for first insertion	10
Per line, for each subsequent insertion to 3 mo's.	05
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Advertisements intended for insertion in any particular issue should reach the office of publication at least three clear days before the day of publication, to insure insertion.

All communications, orders and remittances should be addressed and made payable to TOKER & Co., Peterborough, Ont.

Communications intended for insertion in the CANADA LUMBERMAN, must be accompanied by the name of the writer, not necessarily for publication, but as a guarantee of good faith. Communications to insure insertion (if accepted) in the following number, should be in the hands of the publishers a week before the date of the next issue.

PETERBOROUGH, Ont. APRIL 15, 1881

WE received a special dispatch from Ottawa, dated the 11th instant, which says that McEbymort's sawmill is in operation with a gang of 75 men. This is the first opening of the season. Reports from tne Upper Gatineau state that there are several feet of snow in the bush yet. The water is very low, and unless there are heavy rains within two weeks a great deal of pine timber will be stuck.

THE *Northwest Lumberman* says: The late opening of the season that the indications now promise will have a tendency to make business, when it does begin, very active. The mills will have to work hard to get out what they intend to manufacture, and the dealers will be equally busy receiving it, piling it up and selling it. The trade that has keen kept back by the embargo on transportation will probably be heard from in the shape of plentiful orders when the blockade is raised, and this business added to that which may ordinarily be expected in the spring, will, no doubt, make the neighborhood of a lumber yard a lively place, in the course of two or three weeks. The prospect, altogether, is that a good business will be done as soon as it is possible to do it, and when it does come, the activity of trade will, no doubt, make up, in a great measure, for the enforced dullness of the earlier months of the year.

A CORRESPONDENT informs us that the wealthy and energetic firm of Messrs. Thomas Cundle & Co. are making preparations to start their sawmill situated on the extensive limits recently acquired by them on Cockburns' Island, Lake Huron. These limits extend over 130 square miles, equal to about 150,000 acres, and are covered with a large quantity of pine, hemlock and cedar timber, which, if the logs at present in their boom may be taken as a fair sample, is of a very superior quality and which will, if properly manufactured, make A 1. lumber. The pine is thin in the bark and singularly free from sap, while the cedar is said to be long enough to scaffold a church tower, and sufficient in quantity to fence Lake Huron. Being situated as they are on the direct line of steamboat travel between Chicago, Collingwood and the Welland Canal we are not surprised to learn that some of our American cousins are casting a longing eye after them. We hope however that if Messrs. Cundle & Co. do part with them they will fall into Canadian and not American hands.

A LUMBERMEN'S ASSOCIATION.

We have had several suggestions made to us by lumbermen, as to the expediency of regularly organizing a Lumbermen's Association, and have been urged to write in support of it. There can, we think, be little doubt that such an organization would be of great assistance and benefit to the trade. In fact the expediency and even the necessity of organizing has already been fully recognised, and has been acted upon. Not long ago the Ontario lumbermen met together to discuss questions of interest to them, and by means of a regularly appointed deputation called the attention of the Provincial Government to certain requirements of the trade. On that occasion they were successful in obtaining the concession of several important points, which would probably not have been so readily yielded to their individual and separate solicitation. So too the Quebec lumbermen last month collectively addressed the Administration of their Province, with some immediate good results and the promise of more. But in these cases the organization was only temporary, being allowed to lapse into disuetude as soon as the immediate emergency was over, only to be renewed again under the influence of some pressing necessity. But this implies a great waste of time and energy with the minimum of advansage. If there were a permanently constituted association, it would always be prepared for consultation and action whenever, expedient, without waiting till some grievance became intollerable. In many other ways too besides dealing with the Government such an organization would be found useful by the trade. They are in fact so obvious that we need hardly point them out.

It has been suggested to us that an appropriate form for the organization would be in the shape of local associations with their committees and secretary to be established at the different lumbering centres, such, as regards Ontario, as the Ottawa Valley, the Bay of Quinte, the Georgian Bay and Peterborough. These local bodies would have charge of the local interests, and would also unite in a Provincial association to deal with general questions.

The farmers, the dairymen, and many other industries find it expedient and useful thus to bind themselves together for common action and mutual consultation, so it seems very natural to assume that the great lumber and timber industry would benefit at least equally by adopting a similar course.

We hope that some of our readers, who are interested in this matter, will give their views of the best means of arriving at this result. We will gladly find space in our columns for a discussion of the subject.

A FOREST COMMISSION.

It is with much satisfaction that we observe that there is a growing manifestion of public interest in that very important subject, the preservation of our forests. One great proof of this is the frequent discussion of this matter recently in the columns of the press, which is a sure index to the direction of public opinion. In this number we give extracts from the *Globe*, *Mail* and other journals, and we might have given many more of a similar character, for we notice one paper after another, without regard to their political colour, calling attention to the threatened extirpation of our forests at no distant period, and to the necessity of husbanding our sylvan wealth.

We particularly invite notice to the article we have quoted from the *Globe*, and more especially to the last portion of it. We can heartily endorse its suggestion of a commission to enquire into the whole subject of forestry, for we believe it would be of the greatest benefit. The Agricultural Commission has collected and published much valuable information in regard to this matter, but much more is required, and the question should be looked at from other points of view. A commission especially appointed for this purpose, might for instance obtain information and report upon the forest regulations and administration of other countries, thus being enabled intelligently to suggest such a modification of them as might be adopted by us with advantage under the special circumstances of this country. We have much to learn in regard to this, and we should not defer taking a lesson from other countries till it is too late.

TRANSPORTATION NOTES.

LUMBER FREIGHTS from East Saginaw, Mich., to Buffalo are expected to open at $3. Saginaw Bay is still frozen solid in every direction as far as the eye can reach.

A SERIOUS break occurred in the Erie canal at Lockport when the two lower locks of the ten combined caved in and became a mass of ruins. It will be some time before the damage is repaired. The ten combined locks were completed on October 26th, 1825, and have long been looked upon as one of the finest pieces of masonry in the State.

THE statement has been made so distinctly that lumber shippers were willing to pay $1.25 for cargoes from Toronto to Oswego, that it was considered there could be no doubt about it. A shipping firm sends a note to the *Globe*, however, stating that the *Jane McLeod* has been chartered to load lumber for Oswego, as soon as she arrives here, at $1.20. The note contained the observation also that $1.25 had not been refused. This may be strictly correct; but it would have been more explicit to have said that $1.25 had not been offered. And, in any event, the statement is from one firm only; which leaves it quite possible that $1.25 has been offered by other parties, which we believe to have been the case. The rate of $150 is certainly far from being assured.

THE Chicago *Tribune* of the 5th has the following observations:—"Considerable enquiry for grain carrying vessels is developing. The shippers in the market do not care to pay over seven cents on corn to Buffalo, and as a rule carriers decline to accept this figure, being impressed with the idea that eight cents will be freely paid before navigation opens through the straits. Agents anticipate a good demand before the 15th inst., when the winter storage ceases. They agree with the owners of vessels that eight cents on corn to Buffalo may be obtained. On Friday Mr. Geddes chartered the Canadian schooner *Manzanilla*, through Messrs. Atkins & Cecdwith, to load with 23,000 bushels of corn for Kingston. The agents decline to make public the rate allowed per bushel, but assure parties enquiring that it is better than has been paid to a Lake Ontario port prior to the opening of navigation for several seasons. They claim also that the freight allowed is better than seven cents to Buffalo. From other sources pointers have been obtained which seem to indicate that the *Manzanilla* gets about 11 cents per bushel."

BASS RIVER, N. B.

THE WEATHER.—Although not exactly accurate in all his predictions, Vennor has in some degree redeemed his credit by giving us on the North Shore a remarkably severe winter, with snows of unusual depth, and much broken weather. The log crop, however, in spite of these drawbacks, will be a fair one, both in quantity and quality.

LOSS OF LIFE.—A number of very serious accidents occurred, one by which Thos. Cail, one of our leading lumber operators, lost his life.

THE DRIVES.—The prospects for brook drives is excellent, and no doubt seems to be felt of the stuff coming down.

OUR LUMBERMEN.—Our leading operators in Kent are as nearly as possible in the following order:—George McLeod, S. & A. Dunn, J. & W. Brent, E. Walker, R. N. Doherty, J. Ford, Cail Bros., T. Curran, H. O'Leary, Thomas Coats, Robinson Bros., Peters Bros., T. & R. Atkinson, and W. Bowser.

THE STUMP ACT, ETC.—Some dissatisfaction is expressed at the way the stumpage tax is collected. It in effect offers a premium to successful fraud. An effort should also be made to stop the destruction of the hemlock now going on.

C. C. C.

March 16th, 1881.

SAINT JOHN, N. B.

STOCK OF LUMBER.—The stock of deals at this port is unusually low. In past years we generally commenced the winter season with a stock of sixty to eighty million superficial feet, whereas at the beginning of the winter just past, only about one-third of that quantity was held. Several cargoes have been shipped during the winter, and when the loading of the ships now in port (as referred to below) shall be completed, the stock will be pretty well exhausted.

WORK IN THE WOODS.—The past winter, upon the whole, has been favorable for lumbering operations, but was cut somewhat short by the uncommonly mild weather throughout the month of March, causing the lakes and streams to break up very early, and therefore shortening the work in the woods several weeks, curtailing the supply of logs to that extent, which will amount to a considerable quantity in the aggregate.

THE STREAMS.—The ice in the river had wasted to such an extent that it was expected to be clear by the 1st of April, but a sudden change in the weather to severe cold for the last ten days has so hardened the ice that it will probably not run out much earlier than the usual time, the latter part of this month. The great waste of snow and ice so early causes some uneasiness regarding the prospects for stream driving, and much will depend upon the rains at the right time as to the quantity of logs that may be brought to market.

FREIGHTS.—We have now in port two ships of over 1,500 tons register each, loading for Liverpool, two loading for other ports in England, and three for Ireland. Freights rule very low; one of the above ships is chartered at 56-3 c.d. for Liverpool, and another at 57-6 c.d. for Bristol Channel.

STANBRIDGE, MISSISQUOI.

THE FORESTS EXHAUSTED.—The lumbering business in this vicinity is fast dying out. I stood by its cradle and should not need to live long to be at its funeral. The extensive pine forests on the shores of Lake Champlain and its tributaries, together with those along the banks of the Yamaska River, disappeared with a rapidity that leaves us nothing but regret. The first and best of this timber went to Quebec for a very low price, the last and poorest to New York. Then began the slaughter of hemlock and spruce, which, I think, we realized more from, than we did from the good pine. Nearly all the lumber we make now is for home use, but fifty miles or so north and east of here, we are told, that along the lines of the new railroads, our "brethren" are doing a smashing business. I say "brethren," for all my working days were spent in this line either as a laborer or proprietor in a small way. From long association with this industry, I have a fellow-feeling for all who are engaged it it. We are not the men who get up "corners" in wheat, coal oil monopolies, nor are we money changers, making nothing for use or luxury, but for all we ask of the public we give a fair equivalent. Every blow the axe-man strikes means some good to mankind, and every plank from the hands of the sawyer, the same. The "shantyman" prefers honest labor to loafing round all winter in idleness or something worse. These is the true ring in every man engaged in our business. The operator, or even his subordinate boss, if need should be, are fit for generals. The management of Starks of Bennington, and Brown of Lundy's Lane, are cases in point.

E. CHANDLE.

RUSSIA.

From recent reports from the interior of the country we gather that, in consequence of the unusual quantity of snow in the forests this winter, it is doubtful whether the entire quantity of timber contracted for by the lumbermen can be prepared. The cutting and sledging of the timber are carried on with great difficulty. The frost continues severe at Cronstadt. The ice is thick and the snow deep, and the opinion of a late opening continues to prevail.—*Timber Trades Journal.*

HAGYARD'S PECTORAL BALSAM; a few doses relieves the most distressing cough, and a twenty-five cent bottle has cured many a sufferer from Asthma, Bronchitis, Croup, Influenza, Hoarseness and Soreness of the Chest. It is the grand specific for all throat and lung complaints leading to consumption.

Trade Notes.

DUTTON.—Mr. Daniel McKee, of Dutton, Elgin Co., Ont., has hardwood logs on hand equal to 400,000 feet for this season's cut.

SIMCOE.—Mr. A. McCall has two steam sawmills in operation this season, and will cut about three million feet of pine and hardwood.

IONA.—Mr. Britton, Iona, County of Elgin, Ont., has leased his mill to Mr. McClandress, who will cut about two million feet of hardwood this summer.

AN exchange says:—Hall & Co's barges of Ogdensburg have contracted to bring lumber to Oswego this season at 90c. a thousand, which is he same as they received last year.

PORT DOVER.—Mr. J. Jackson, of Simcoe, will raft about 7,500,000 of logs to Tonawanda from Port Dover. Mr. Wm. Tisdale, saw log contractor, Normandale, will also raft 60,000 feet of pine and 60,000 feet of oak for Tonawanda.

BUFFALO parties have chartered three boats which will carry 1,750,000 feet of lumber each trip, and these boats will ply all the season between Pequaming, Mich., and Buffalo in the lumber trade. The charter is for $3.87½ per 1,000 feet.

LAKE ST. CLAIR.—On the south side of Lake St. Clair, west of River Ruscon, and east to Stoney Point, there is now ready to be rafted for Detroit, about 3,000,000 feet of elm logs; 300,000 feet basswood logs; 100,000 feet white ash, besides a considerable quantity of square timber. The contractors are Messrs. Berry & Co., Moses W. Field, Salliote & Roup, and B. Hall.

AT Saginaw lumber freights are expected to be much better than last season. There are 250,000,000 feet of lumber on the docks, a large proportion of which is sold. to go forward, and should the season open late there will be a pressure for capacity to meet the requirements of the business. It is thought that freights will not open less than $3.25 to Buffalo.—*Toledo Blade.*

LAKE ERIE.—Large quantities of saw logs and square timber are uow in readiness at different points on Lake Erie to be rafted and shipped. Mr. S. Wigle, of Windsor, Ont., has taken out this winter, and has ready for shipment, 80,000 cubic feet of oak, about 4,000 feet of white wood, and 3,000 ties (equal to three vessel loads) from the County of Essex. In Michigan he has 50,000 feet of oak, and in Ohio 220,000 feet of oak, all to be shipped by vessel to Quebec and Europe. The Ohio oak will be shipped from Toledo.

THE Montreal *Gazette* of April 2nd, says that Oscar Fulton, M.P., of the firm of Fulton & Wyatt, Avonmore, who is now in the city, we hear, has made sale to local manufactures of 700,000 to 800,000 feet of basswood, black ash and soft elm on p.t. The current rates are, however, from $10.50 to $14.50 per thousand feet, f.o.b., at shipping point. Everything points to an extensive trade in lumber of all kinds during the coming season. Americans have been in the field making large purchases for some time past in the different lumbering regions of Canada as the requirements for the States this year it is said will largely exceed those of any former season.

The *Argus* comments as follows on the Albany market:—"We have not any change to note in the tone or the condition of the market for pine, hard, or coarse lumber. The shipments continue free, and the market is somewhat strengthened by the large quantity of lumber sold at Cambridge (Mass.) on Sunday last to the fire insurance companies. The market is more quiet than it was a week or ten days ago on account of the continued cold weather checking building operations, and thus keeping buyers out of market. The shipments of old and new sales are rapidly depleting our stocks, which will be at a very low figure before the canal will be opened for navigation; the opening this year, in consequence of the ungenial weather, will be later than usual, certainly not before May 1st, and it may be delayed to May 10th."

LUMBERMEN will be interested to learn that a new shanty cook-stove, manufactured by Adam Hall, Peterboro', is taking well wherever used.

BUSH FIRES.

THEIR DANGER AND DESTRUCTIVENESS—A SUGGESTIVE SITUATION.

A Kingston correspondent, "Agricola," writes very sensibly to the *Globe* on the subject of bush fires. His sentiments are entertained by many others, and hence the interest which attaches to the publication of his letter. He remarks:

An examination of the files of any paper published in the Province for twenty-five years will show that except in years of extraordinary rainfall the particulars of disastrous bush fires during autumn are given with remarkable yearly regularity; that the same charges of "carelessness" and "negligence" are preferred to account for them; and that year in and year out the one opinion is expressed that something should be done to prevent them. Unless this opinion amounts to a deep-rooted conviction that the destruction of property involved is something enormous, which is really the case, and that something must be done to prevent further havoc, the regular occurrence of autumnal bush fires will but serve to illustrate the law that the direst calamities are endurable if men are accustomed to submit to them.

I estimate the destruction, total at that, of standing timber and fuel—pine, hemlock, cedar, oak, poplar, tamarack, beech, and maple—in the county of Frontenac by bush fires during the past twenty-five years, at 50,000 acres. If now standing this would be worth at least half a million of dollars, and converted into square timber, sawn lumber, bark, ties, and cordwood, would be worth $1,500,000. Frontenac has not been specially visited, Gastings, Addington, North Leeds, Lanark and Renfrew, and more or less the whole of the Laurentian region, so far as settlement extends, have suffered equally in Frontenac. It is within the mark to put the loss to individuals throughout the province at $12,500,000 during the past twenty-five years. I do not take into account the loss to the public from the destruction of timber on the Crown domain.

It is utterly useless to grapple with the causes of this calamity by calling on the Government to inspect, prosecute, fine or imprison. The remedy is the obvious application of the principle that the member of a community is entitled to the protection of his goods and person by that community. Where the means of protection, owing to the defective administration of the law, are inadequate, the commuuity should satisfy the damage done to a member. For example:. The township will not hire night-watches to prevent my sheep being worried by prowling dogs, and if I must hire a night-watch I shall have no profit in sheep farming. I cannot detect the prowlers, but if I have my remedy for the destruction of my sheep against the township it will be my neighbor's interest to see that his tax bill is not made heavier by the possession of a cur. As the law now stands it is no concern of mine—that is, it is not my interest to visit a fire on my neighbor's farm for the purpose of seeing that he uses due precaution to prevent its spread, unless I have reason to apprehend danger to my property. If that danger passes me unhurt it is not within the scope of my duty to visit the fire to see that there is no chance of danger to another, else in a newly settled district I mght find full occupation as a watchman for the community to the neglect of my own affairs. But if the value of the timber on a few hundred acres destroyed by fire were assessed on the township and collected from the ratepayers, there would soon be organized Vigilance Committies of the most efficient kind. There is another direction in which such a method would be useful. The fires caused by cinders from passing locomotives are known to be frequent. If my stables are burnt, and fires runs into my wood lot, it will pay me better to submit to the loss than to engage in a lawsuit with a wealthy corporation, who, not content with injuring me to the extent of $50 or $100 by their neglect to put bonnets on the smoke stacks and to erect wire fences, would drag me to the Supreme Court before they would "give in," and probably take away my farm from me to satisfy their bill of costs. The municipalities could better take up a case of this kind than a private person.

Unless rural communities are incited to action in the way pointed out, just as the inhabitants of the English hundreds were made to see it was their interest to raise a hue and cry against a thief rather than bear a tax for his robbery, it is idle to hope for anything else than the permanent institution of autumnal bush fires.

Freights from Ottawa.

A recent dispatch from Ottawa says that the coming season of navigation, so far as rates are concerned, promises to be for the boat-owners the best which this section of country has seen for years, and forwarders are in correspondingly good spirit. The contracts already made are at good rates and the prospects is that the men not now employed will have all they can do at prices equally good if not better. At the present date it is not possible to tell in many cases what the opening of the season may bring, several transactions being now pending, which may change individual bargains. The carrying capacity of the various forwarders has been considerably enlarged, but the freight to be carried has increased in greater proportions, so that they virtually have matters in their own hands. If they do not become too greedy they will find all they can do as long as the season lasts. There can be no denial of the fact that boating this season promises, to those who understand the work, to be as great a bonanza as it used to be some 10 or 14 years ago. Several contracts have already been made for large shipments between this port and Quebec, New York, White Hall and Burlington. Murphy & Co. have closed for the transportation of a million and a quarter feet.

THAT Marvellous Purifyer BURDOCK BLOOD BITTERS, will speedily change the sallow face to one of freshness, health and beauty. It regulates the Bowels, acts promptly on the Liver and Kidneys and strengthens the system when broken down by nervous and general debility. Ask your druggist for a trial bottle, the cost is only 10 cents. Large bottles $1.00.

E. S. VINDIN,
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LUMBER MERCHANT
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MANUFACTURER OF
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Hotel Ottawa,
No. 21 North Side King Square,
ST. JOHN, N. B.
E. COSMAN, PROPRIETOR.
Terms $1.00 to $1.50 per day. 13

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A COMPETENT MAN, with thorough knowledge of Tram Railways, to go to Jamaica, to take charge of the laying and keeping in order the rails and road bed of a ten mile tramway, and when not employed to make himself otherwise useful. To a first-class competent man good salary will be paid.
Address, with references and salary expected,
The Waterous Engine Works Co.,
Brantford, Canada.
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The Subscriber makes to order all kinds of
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Hammocks, Tarpaulins, Waggon and Horse Covers,
Also dealer in all kinds of OIL SKIN Clothing, Nets and Seine Twines.
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Manufactured from the BEST English Cast Steel and Warranted equal to the Best Imported File.
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THE RUSSELL HOUSE,
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JAS. A. GOUIN, - - PROPRIETOR.
Is the Favourite Resort of Leading Public men of the Dominion attending the annual Session of Parliament.
Ministers of the Crown, Senators, Members of Parliament, Public Officials, as well as those having business with the various Departments of the Government. It is also the headquarters of those having dealings with the princely Lumber Manufacturers in the Great Pine Valley, of which Ottawa is the acknowledged centre.
THE RUSSEL HOUSE being central, almost abutting on the magnificant PARLIAMENT and DEPARTMENTAL BUILDING—the pride of the Country—is thus conveniently situated for those visiting the City on public business. But the location is also everything that could be desired alike for the man of business and the man of pleasure. A few minutes walk brings the guest of the Hotel within reach, not only of all the principal business resorts, but also of the most splendid Mountain and Valley Scenery that can be seen anywhere, as also of the two almost unrivalled Waterfalls—the Chaudiere and Rideau—and of the extensive Manufacturing Establishments and Depots of the leading Lumberman. But, besides the beautiful scenery, which, it may be mentioned, includes the magnificant Ottawa and two of its grand tributaries—the Rideau and Gatineau—there are in the immediate neighborhood, beautiful Lakes and apparently never-ending woods, which afford opportunities for the finest Fishing and Shooting that can be obtained on the Continent.
THE RUSSELL HOUSE affords excellent accommodation for 300 guests; its table is abundantly supplied with Viands of the choicest description, in season, and nothing is left undone to make every visitor feel comfortably "at home."
Omnibusses meet the Arrival of every Train and Boat. b26

LUMBERING IN THE NOR'-WEST.

We take the following from the report of the Department of the Interior for the year 1880:—

THE TIMBER SUPPLY.

"Although it is, of course, an admitted fact that there are large prairie areas which are but indifferently provided with wood, yet the more the Territories are explored, the more apparent does it become that the timber supply is not so limited as was at one time supposed, that properly husbanded it is sufficient for all practical requirements, that within a reasonable distance of the treeless plains there is plenty of building and fencing timber which can be procured at no very great cost, when the the means of internal communication have been improved, and that on the north slope of the valley of the Saskatchewan River there are, easily accessible to the lumberer, continuous forests of fir timber, for the manufacture and transportation of the products of which that river and its tributaries afford facilities.

"The demand for manufactured timber has increased very greatly in Manitoba and the settled portions of the Territories, and within the past two years a sub-branch of the Dominion Lands Office has been organized, under the supervision of which the forests on the public domain have been protected from the systematic plunder from which they previously suffered, and have become the source of a large and rapidly growing revenue."

THE SAWMILLS.

The following statement shows the names of owners of all the sawmills in Keewatin, Manitoba and North-west Territory, and where situated, kind of power, capacity per 12 hours, when erected, kind of timber cut, and kind of lumber manufactured:—

KEEWATIN.

Adams & Schneider, Pine Falls, Winnipeg River. Water power. Capacity 10,000 feet. Erected 1879. Spruce—Lumber, shingles and lath.

Walkley & Burrows, Mouth of Winnipeg River. Steam power. Capacity 6,000 feet. Erected 1878. Spruce—Lumber and lath.

Shore & Co., Big Black Island, Lake Winnipeg. Steam power. Capacity 8,000 feet. Erected 1876. Spruce—Lumber and lath.

Brouse, Stevens & Co., Bad Throat River. Water power. Capacity 10,000 feet. Erected 1879. Spruce—Lumber and shingles.

Dick & Banning, Whole River (moved from Sandy Bar Creek). Steam power. Capacity 6,000 feet. Erected 1879. Spruce—Lumber.

Brown & Rutherford, Moose Island, Lake Winnipeg. Steam power. Capacity 10,000 feet. Erected 1880. Spruce—Lumber.

Keewatin Lumbering & Manufacturing Co., Keewatin Mills, Winnipeg River. Water power. Capacity 120,000 feet. Erected 1880. Red and white pine—Lumber, shingles and lath.

Smart & Co., Hawk Lake, Keewatin. Steam power. Erected 1880. White pine—Shingles.

Joseph Whitehead, Whitemouth River, C.P. R. Steam power. Capacity 8,000 feet. Erected 1880. Spruce and tamarac—Lumber. Removed from St. Boniface.

S. H. Fowler, Fort Francis. Steam power.

MAITOBA.

W. J. M. Pratt, Totogon. Steam power. Capacity 10,000 feet. Erected 1879. Spruce—Lumber, shingles and lath.

W. P. Smith, Portage la Prairie. Steam power. Capacity 7,000 feet. Erected 1879. Poplar and oak—Lumber.

A. A. Taylor, High Bluff. Steam power. Capacity 10,000 feet. Erected 1874. Poplar and oak—Lumber and shingles.

Hon. C. P. Brown, Gladstone. Steam power. Capacity 5,000 feet. Erected 1875. Spruce—Lumber.

Wesley Smith, Section 33, Township 14, Range 11, West. Steam power. Capacity 5,000 feet. Erected 1880. Oak—Lumber and shingles.

David Bryce, Little White Mud River. Water power. Capacity 5,000 feet. Erected 1879. Poplar—Lumber.

John Moonie, Squirrel Creek. Steam power. Capacity 2,000 feet. Erected 1879. Poplar—Lumber.

Belmont & Co., Nelsonville. Steam power. Capacity 6,000 feet. Erected 1879. Oak and poplar—Lumber, and flour mill.

Nelson & Sons, Mountain City. Steam power. Capacity 4,000 feet. Erected 1879. Oak and poplar—Lumber, and flour mill.

D. Kilgour, Lizard Lake. Steam power. Capacity 2,000 feet. Erected 1878. Oak and poplar—Lumber.

J. Preston, Preston. Steam power. Lumber.

Hon. James McKay Estate. Point du Chene. Steam power. Capacity 6,000 feet. Erected 1876. Spruce and poplar—Lumber and flour mill.

Dick & Banning, Winnipeg. Steam power. Capacity 10,000 feet. Erected 1872. Oak—Scantling and building material, planing mill.

Brown & Rutherford, Winnipeg. Steam power. Capacity 10,000 feet. Erected 1872. All kinds—Scantling and planing mill.

Jarvis & Berrige, Winnipeg. Steam power. Capacity 25,000 feet. Erected 1872. Pine—Lumber and lath, and planing mill.

Daniel E. Sprague, Winnipeg. Steam power. Capacity 7,000 feet. Erected 1880. Pine—Lumber.

Josiah Cohoe, Section 19, Township 7, Range 7, East. Steam power. Capacity 2,000 feet. Erected 1880. Spruce—Lumber.

Abraham Frieser, Stinbach. Steam power. Capacity 4,000 feet. Erected 1879. Spruce and poplar—Lumber.

Peter Tows, Section 22, Township 7, Range 6, East. Steam power. Capacity 1,500 feet. Erected 1880. Spruce and tamarac—Lumber, (portable.)

NORTH-WEST TERRITORY.

Robert McIntosh, Rapid City. Steam power. Capacity 7,500 feet. Erected 1879. Spruce—Lumber and shingles.

George Balkwell, Township 13, Range 19, West. Water power. Capacity 2,000 feet. Erected 1878. Poplar—Lumber and flour mill.

Alexander Cameron, Rolling River, Township 16, Range 18, West. Water power. Capacity 6,000 feet. Erected 1878. Spruce and poplar—Lumber.

D. W. Cummings & Co., Bird Tail Creek, Birtle. Steam power. Capacity 6,000 feet. Erected 1880. Spruce—Lumber and shingles.

Donald Gunn & Bro., Bird Tail Creek, Birtle. Water power. Capacity 2,000 feet. Erected 1880. Spruce—Lumber.

E. Roberts, Little Saskatchewan, Big Bend. Steam power. Capacity 6,000 feet. Erected 1880. Spruce—Lumber and shingles; building flour mill and planing.

Armitage & McCulloch, Little Saskatchewan, Minnedosa. Steam power. Capacity 6,000 feet. Erected 1880. Spruce—Lumber and shingles; flour mill.

Hon. Hudson's Bay Co., Riding Mountain House. Steam power. Capacity 3,000 feet. Erected 1880. Spruce—Lumber; building flour mill.

Mitchell, Byers & Co., Section 23, Township 10, Range 16, West. Steam power. Capacity 3,000 feet. Erected 1880. Spruce and tamarac—Lumber.

W. McKay, Section 23, Township 10, Range 15, West. Steam power. Capacity 3,000 feet. Spruce—Lumber.

R. H. Little, Littleton. Steam power. Capacity 4 to 5,000 feet. Poplar, spruce and tamarac—Lumber; building flour mill.

R. Z. Rogers, Millford. Steam power. Capacity 5,000 feet. Erected 1880. Spruce—Lumber; building flour mill.

Stobart, Eden & Co., Duck Lake, North-west Territory. Steam power. Capacity 5,000 feet. Erected 1880. Pine, small—Lumber and shingles; flour mill (portable.)

Captain Moore, Prince Albert, North-west Territory. Steam power. Capacity 10,000 feet. Erected 1875. Spruce—Lumber and shingles; flour mill.

Hudson's Bay Co., Edmonton, North-west Territory. Steam power. Capacity 10,000 feet. Erected 1880. Spruce—Lumber and shingles.

Morris, McLeod & Belcher, Two miles east of Edmonton, N.W.T. Steam power. Capacity 10,000 feet. Spruce—Lumber, shingles and lath; flour mill.

Government Mill, Sixty miles west of Edmonton, N.W.T. Steam power. Idle.

Williams & Harrison, Section 29, Township 1, Range 18, West. Steam power. Capacity 5,000 feet. Erected 1880. Poplar—Lumber.

D. McFayden, Odanah. Steam power. Capacity 5,000 feet. Erected 1880. Spruce—Lumber and shingles; planing mill.

A NEW HEATER.

The latest apparatus for heating purposes is the invention of Prof. Webster Wells, Professor of Mathematics in the Massachusetts Institute of Technology:—

The principle of this machine is friction, and the simplicity of construction and adaptability to every place where waste power can be utilized are remarkable. It consists only of an iron cylinder, 2 feet long and 1 foot in diameter, having a fixed plate of hardened iron in one end, and a second plate, attached to a revolving shaft, which presses lightly or closely upon the fixed plate, as circumstances require. The cylinder is filled with water, the shaft revolves, and from the friction of the plates the water in an incredibly short time is heated, and by means of steam pipes can be carried to great distances for heating purposes.

The construction of the machine is such that it is easily adapted to every place where there is waste power, as in mills, factories, public buildings, and cars. In fact, in every place where any power is used the machine can be applied, since the power required for its operation is so slight as to be of almost no account. Thus, to carry a machine with 36 square inches of friction plates—the ordinary size—one-half horse power only is required; while a machine with 225 square inches of friction surface will require at most but four horse power, and will heat a room 60x200, or 126,000 cubic feet. In steam cars the machine is easily and cheaply adjusted to the axles, the power being taken directly from the wheels, so that in case of accident, such as started the train of thought which resulted in this invention, all danger from fire is entirely eliminated.

This machine has already been in practical operation for some months, and has demonstrated that with 36 inches of friction surface a room of 10,000 cubic feet can be heated more uniformly and quicker than by the use of coal, wood, or steam, and without expense save the wear of the friction plactes and the cost of extra coal under the boiler.—*American Engineer.*

THE STAMPAGE TAX.

The Newcastle *Advocate*, which improperly calls Mr. George McLeod's letter a "rabid" one, says in defence of the conduct of the Surveyor General:—

"It is well known that as a rule lumber operators are very much opposed to the payment of the stumpage tax, looking upon it as a grievance, and that to further their own interests they sometimes form a 'ring' to keep down the prices of the lands bid in by them. Even though Mr. McLeod's charges are true, (which we shall not believe until they are substantiated in the proper quarter), we ask if it is right for a number of men to combine to lessen the value of our Provincial lands—our best source of revenue—would it be looked upon as wrong for those interested in the welfare of the Province—those charged with the duty of administering its affairs—to step in and break up such a combination?"

This does not meet, explain, or deny Mr. McLeod's most damaging statement against the Surveyor General's honor, to the effect that he (the S.G.) told McLeod that some parties had applied for his land and that he forgot their names, when it appeared as a matter of fact that there was no such application. Further than this when the Government put their own upset price on the land it is a most dangerous thing for them to bid on the land themselves over and above that price.—*St. John, N.B., Globe.*

The Ottawa District.

The Hull *Despatch* speaking of the lumber trade, estimates the cut of logs in the Ottawa district at 12,000,000, or an increase of 33⅓ per cent. on last year's operations. The cut of square timber last year was only 2,000,000 feet, but this year it will probably be 12,000,000. Raftsmen are very scarce this spring and some difficulty will be experienced in getting a sufficient number for the drives.

IMPROVED DRYING KILN.

A cheap and economical apparatus for drying lumber, staves, and other material, has been long needed, and a great deal of time and money has been expended in experiments in this direction without corresponding results. Messrs E. & B. Holmes have perfected a dry kiln which seems to combine all the necessary requisites for a successful drying apparatus.

This dry kiln is composed of several sections, more or less as desired. In the bottom of each of these sections are placed two sets of steam coils of novel construcfion, one above the other, for radiating the heat, and on the side of each section is a thin apartment containing condensing pipes filled with cold water, supplied by a pump or otherwise.

The air in the bottom of the kiln, being heated by the steam coils, passes up through the material to be dried, to the top of the kiln, carrying the moisture with it. Here it enters the thin condensing apartment and passes down, leaving the moisture upon the condensing pipes, and, being cooled, again passes downward under and through the steam coils, where it is reheated, when it again rises up through the material, and so on. In this manner a very rapid circulation is secured, which carries the moisture from the material to be dried and deposits it upon the condensing pipes, from which it runs into a conductor and passes out of the kiln, the same air being used over and over.

Car tracks pass through the kiln, and extend far enough in each direction outside of the kiln to allow of loading, drying, and unloading at the same time. In this way the kiln is kept open long enough to pass one car out and another in, and as only one section is opened, the others are not affected or cooled by it.

The doors of the kilns are made double thickness with an air space between, and are swung on cranes, so that one person can handle them with ease.—*Scientific American.*

A SINGULAR CASE.

From the Woodstock *Times* we learn that a rather singular case was before the Police Court in that place on Tuesday, 29th March. John Dobbyn, of the Township of Euphemia, in the County of Lambton, who is an extensive lumber dealer, preferred a charge against John W. Adams, of Ingersoll, alleging that he had stolen three car loads of lumber. A warrant was issued and placed in the hands of Constable Hall, with instructions to hunt down his man, which he succeeded in doing before daylight the next morning in Ingersoll. The examinations showed that at a conversation between prosecutor and prisoner, the latter was to meet Mr. Dobbyn at Thamesville, in the County of Kent, to cull over three car loads of lumber, which he was to buy for James Stark, of Ingersoll, representing himself as Mr. Stark's agent. At the time appointed, the parties met, but the cars did not come. They separated with the understanding that as soon as prisoner could get cars he would telegraph to Mr. Dobbyn to meet him again, when they would cull, measure and load the lumber. Some days after Mr. Dobbyn accidentally learned that prisoner had been there without letting him know, and had taken away three car loads of his lumber. Upon further inquiry he found that prisoner had shipped the lumber to his own order, and on tracing the matter up he found that two car loads had been sold to one Hays, of Ingersoll. The prisoner was committed to Chatham jail to await his trial for larceny.

Birch for Cabinet Work.

The small value of birch wood for fuel, and its lack of toughness and strength, except in the smaller twigs, have led to its general neglect in the arts. Our more enterprising builders of railway cars, however, have discovered that its light weight, close grain, and rich finish make it admirably suited for certain applications where fine finish and bright effects are desired. The contrasts presented when white birch and light colored ash are relieved by the red of the cherry birch, are said to be peculiar but very pleasing.

THE growing trade in Maryland in the shipment of ivy and swamp-briar roots to the northern cities, where they are made into pipes, whip and cane handles and poor knobs.

Chips.

A MATCH FACTORY has been established in Gridley, Cal., with a capacity of 1,000,000 matches daily.

THREE black bears were killed on March 14, at Sargent & Pendleton's, Beaver Creek, Wis., camp, one of which weighed 400.

A GENTLEMAN of Pensacola, Fla., has patented a timber crib designed to prevent loss from the breaking asunder of timber rafts.

LESS timber than was expected reached Beaumont, Texas, on the recent rise in the river. The mills now have about a four months' stock on hand.

IT is said that the late Lord Seafield planted no fewer than sixty millions of trees on his estates in the counties of Elgin, Banff, and Inverness during his tenure of them.

THE Duluth *News* says that the mills that are now running in that vicinity are so busy that timber for the new Northern Pacific docks is being hewed instead of sawed.

SKIDDING has been so difficult in some of the Michigan pineries, that gangs that before have skidded 100 logs or more per day, this season have been able to skid but from 25 to 30.

The mills of Stillwater, Minn., and its vicinity expect to cut 132,000,000 feet of lumber this season. The general quality of their stock of logs is said to be above the average of four or five years past.

IT has not been an unusual thing for the mills on the Penobscot River, Me., to be idle for want of logs until the spring drive got down. This year the mills have a good stock of old logs, and will get an early start.

OPERATORS in the woods of St. Joseph's Island, Canada, during the past winter, got out 91,000 cedar railway ties, 45,000 cedar posts, 11,000 telegraph poles, 40,000 tamarack ties, besides large quantities of pine and hardwood.

ROBERT BOGART, of Pittston, felled a tree the other day which was about eight inches in diameter. Hanging to a limb about thirty feet from the ground he found a very old fashioned gun, stocked full length, and which, it is supposed, grew up with the tree.

THE Montreal *Witness* says:—Passenger traffic on the Grand Trunk is now very heavy. It is said that it is now carrying more lumbermen from Michigan to Canada than ever before in its history. The camps are breaking up and the men are returning to their homes.

ALL the log driving on Muskoka rivers will this year be under the control of the Muskoka Slide, Dam and Boom Co., and it is expected that the logs will be passed through with more despatch than heretofore and not obstruct steamboat traffic to the extent they have in the past.

THE business in timber at Hamilton will be something enormous this spring. Several rafting shanties are being erected and binding poles in thousands are piled along the G.W.R. docks. Some of the timber there at present is pronounced the finest that has ever been laid there for rafting purposes.

MR. D. B. CHARLESON, of Sarnia, who is one of the heaviest lumber dealers in Western Canada, has had delivered at Brigden station, on the Canada Southern, for shipment east, 70,000 feet of square timber and a large number of staves. It will require 250 cars to convey all this material to its destination.

THE lumber and forest products transported on the railways of Minnesota in 1880 amounted, in weight, to 710,863 tons, and if reduced to feet, at three pounds to the foot, would be 177,516,000 feet. The St. Paul, Minneapolis & Manitoba road carried a greater amount than any other one.

A CHOPPER, James Melville, employed on the Menominee river, Mich., lodged a tree that scaled 4,500 feet on another tree 20 feet away, tied his axe to his waist and climbed the tree to the height of 80 feet, where, standing between two limbs he cleared the obstruction away.

THE St. Thomas correspondent of the London *Free Press* says that a large quantity of timber is being forwarded from this section, at present, and to such an extent has the business reached this season that two timber trains are constantly working on the Air Line Railway, both east and west of this city. A large force of men is employed, an average of twenty cars *per diem* being loaded by each train.

A PARCEL of 2,000 doors, which were sent to London from Canada via Boston for the Canadian timber company, were disposed of readily; the quality being reported as very satisfactory. Another lot was expected in a few days and a large business in the doors is expected during the forthcoming season.

A GREAT deal of work for Manitoba is being done in the factories in Hamilton. The firm of Robin & Sadler is exhibiting here a unique specimen of their belt manufacture, which they have made for a sawmill of the Hudson Bay Company. It is claimed to be the first belt made in Canada in one solid piece in the breadth throughout. Owing to its uniformity of strain and greater durability, it ensures freedom from accidents. It is thirty-six inches wide by 88½ feet long, and required in its manufacture fifty selected hides.

THE Goderich *Star* says that Mr. Joseph Kidd bought at Georgian Bay, a few days ago, 3,000,000 feet of pine logs, ready to be boomed and brought down as soon as navigation opens. He has also about 1,000,000 of hemlock, elm and basswood, up along the shore. These he intends bringing down by his new boat, the *Josephine Kidd*. He is about to have the telegraph wire extended to his office at the works, as soon as the frost is out of the ground. It will be of the greatest convenience, since his son commands the electric key.

THE Grand Traverse *Herald* says: There has been an unwonted activity in the cedar market this winter. This is a timber that has hardly had a "market" yet, but the near future will open up one for it. Cedar timber is to-day, at the prices at which it can be bought, the best investment to be had in the timber line. Northern Michigan has a mine of wealth in its low lands covered with this, now seemingly worthless, timber. Lumbermen and manufacturers are already directing their attention to this matter.

A RECENT despatch from Albany, N.Y., says: "A large amount of lumber has left the yards during the week, employing all the boats and barges that have arrived there. A steady demand has been realized, and still continues. The yards begin to show the effect of the shipments when no arrivals by canal fill the vacant spaces. There is still a fair amount of nearly all kinds for sale, without any change from the opening prices, but the probability is that the yards will be nearly bare before receipts by canal will again give new stock and assortment."

THE *Indian Agriculturist* states that Messrs. Shaw, Finlayson & Co., of Calcutta, are desirous of starting a sawmill in the Upper Dehing Forest, and the Planters's Stores Company are going to establish one also in the same locality. Sir Steuart Bayley says of these:—"The establishment of sawmills, two of which it is hoped will very shortly be opened in Upper Assam, should create a demand for timber suitable for tea boxes, and thus replace with indigenous produce, to the profit of the province, the present expensive and circuitous method of importing teak planks for the purpose from Burmah. Scarcity of local labor, not want of good wood for tea boxes, is the sole explanation of the latter, and the mills, if judiciously worked, should do a good business."

THE Farwell *Register* says: There was unloaded at this place last week a new logging railroad engine for Norris & Uhl, of Grand Rapids, to be used on the new logging railroad about 15 miles north of this place. This engine was placed on runners and was drawn by four span of horses up the Ionia and Houghton Lake State road to the Gerrish railroad, and from thence again on runners to Norway Lake, T. 18 N. of R. 5 W., where the new road commences and runs to the Muskegon river, a distance of three miles. Norris & Uhl, as agents for the Warren estate, have about 45,000,000 feet of logs to put in in the vicinity of Norway Lake. The logs are put in to the lake, and from thence hauled by the engine to the Muskegon river.

THE *Lumberman's Gazette* says:—One and a half million feet of logs for the lumber manufacturers of the eastern shore of Michigan to begin work on when the cutting season opens, is about the outlook. By which it is not meant they will all be in the booms, but the log crop, all told, from the Straits to the Saginaws, will amount to about that sum. The crop will not be a cheaply got in one, for not only have wages been higher, but the labor of hauling has been increased, especially toward the latter part of the season, since there began to be so much snow. The addition to the cost of getting in the logs is estimated all the way from 10 to 25 per cent. The new cut of lumber ought, therefore to bring more than the old, but there will be no advance unless the market warrants it.

MAINE'S LUMBER TRADE.

The logging season will come to a close next week. A Penobscot lumberman says there are still two and a half feet of snow in some parts of the woods, but the brooks are rising rapidly and overflowing the roads, driving the loggers out. About two-thirds of the West Branch operators are out and the rest are coming. The cut on the Penobscot and tributaries will be about 140,000,000. Orders are moderately plenty, and it is expected that the demand will soon be large. Freights are fair; we notice one charter to Boston at $1.60 per M. on lumber and $2.50 per M. on bricks. Considerable short lumber has been shipped to Boston by rail this winter, but now the natural channel is open and brisk times are looked for soon. The lumber mills on the Penobscot are starting up. The 20,000,000 of logs now on hand on the river will suffice to keep them busy until the new logs arrive. The large boom on the "Saco" about a mile up the river, will soon be filling up with about 15.000,000 feet of logs cut during the winter. Of this amount 12,000,000 feet comes to Joseph Hobson of Biddeford.—*St. John Globe, March 28,*

THE SONG OF THE SAW.

BY J. W. FITZMAURICE.

A song, a song for the millman's saw,
That whirls with endless din,
Bringing work and wealth to the sons of toil
With its busy whirl and spin.
Though others may boast of the loom or plough,
We value them not a straw,
For our daily strife in the battle of life
Is fought by the millman's saw.

It gives no theme for the poet's dream,
Nor story nor song does it mean;
But the pioneer's saw in the foremost rank
Of the world's grand march is seen.
The forests so brown, at its whirl go down,
And cities spring up where they fell;
While work well done, and wealth well won,
Is the record it loves to tell.

So a song for the saw, the millman's boast,
Our emblem honest and good;
We sing to the din of its noisy spin,
Our lay as workers in wood;
The slaves of the lamp, the forge or the mine,
Must follow wherever we draw,
For ours still is the place, to be first in the race,
That is won by the whirl of the saw.

Why Ice Breaks Down Trees.

A gentleman recently had his curiosity aroused while the trees were covered thickly with ice, as to the relative weight of the ice and the wood it surrounded. So he cut off a limb, and found it weighed two and three-quarter pounds; after the ice was melted it weighed two ounces. Two hours later another trial was made; at first the limb weighed four and a half pounds; after the ice was removed it weighed three ounces. Another trial showed a weight of thirty-two pounds, while the limb alone weighed two pounds, making thirty-two pounds of ice.

Deserves Success.

THE CANADA LUMBERMAN has become the property of Messrs. Toker & Co., publishers of the REVIEW at Peterborough. Its typographic appearance and general make-up is a great improvement on what it was previously, while the information it contains is of much interest to all in the lumber trade as well as commercial men generally, being devoted to trade matters. The LUMBERMAN is made up in pamphlet form, 16 pages, and will be published semi-monthly at $2 per annum. It deserves success.—*Ottawa Free Press.*

Advertisements.

Wanted.

A SECOND HAND DOUBLE EDGER; also a LATH MACHINE, both in good repair. Reply stating lowest cash terms or particulars to Box 1002, Peterborough. b10

For Sale.

A 40 INCH LEFFELL WHEEL and COMPLETE CIRCULAR RIG, all in good order, suitable for a fifteen foot head. Apply to Box 1002, Peterborough. b10

Reid & Co.,

WHOLESALE LUMBER DEALERS. Lumber, lath, shingles, &c. Car lots to suit customers. Best Culls in the market at from $6 to $7 per M.
OFFICE ON DOCK.—Esplande, foot of Shelbourne Street, Toronto b15

Hardwood Timber Land

FOR SALE.

FOR SALE, 1200 ACRES HARDWOOD TIMBER LAND near Nipissing Railway, Coboconk. Easy terms. OSHAWA CABINET CO., Oshawa. b13

Timber Limits for Sale.

SEVERAL MOST VALUABLE TIMBER LIMITS on North Shore of Lake Huron.
For particulars apply to THOS. SHORTISS, Imperial Bank Building, Toronto. b12

Situation Wanted.

A Book-keeper of first-class experience desires a situation with a lumber firm. An opportunity of acquiring knowledge of the lumber trade more of an object than the amount of salary. Unexceptional references both as to character and ability.
b15 Apply to the Editor of THE CANADA LUMBERMAN.

The Stewart House,

Headquarters of Lumbermen in Peterborough, corner of Hunter and Water Streets. Good accommodation. Terms, $1 per day. Free 'bus at trains.
b15 T. CAVANAGH, Proprietor.

Allandale Junction Hotel

Travellers by Northern Railway have 15 to 20 minutes by all trains, for refreshments. Solid meals. Tea and coffee at counter. Fine brands of Liquors and choice Cigars. b17 E. S. MEEKING, Proprietor.

Orillia House,

ORILLIA.

New and Commodious Brick Building; best north of Toronto; splendid sample rooms; centrally located; free 'bus. b20 JOHN KELLY, Proprietor.

The Queen's Hotel,

TORONTO, CANADA.

McGAW & WINNETT, Proprietors. Patronized by Royalty and the best families. Prices graduated according to room. b20

St. Lawrence Hall,

PORT HOPE.

Is noted for its superior home-like comforts—a well kept table, equalling the best hotels in Toronto, and large, well-furnished rooms. Good sample rooms on ground flour. Walton Street, Port Hope.
b26 WM. MACKIE, Proprietor.

St. Louis Hotel.

THE RUSSELL HOTEL CO., Proprietors.

WILLIS RUSSELL, Pres., Quebec.

This hotel, which is unrivalled for size, style and locality in Quebec, is open throughout the year for pleasure and business travel. b18

Queen's Hotel,

BRACEBRIDGE.

JOHN HIGGINS, Proprietor. The proprietor (late of Georgetown,) having lately purchased the above hotel,) will endeavor to make it one of the best houses in the District of Muskoka. Tourists and hunting parties will receive every possible attention. Free 'bus to and from steamboat wharf. Terms, $1 per day. b20

Fraser's Hotel,

GRAVENHURST, ONT.

HENRY FRASER, proprietor, (successor to Dougland Brown.) Mr. Fraser having purchased and thoroughly renovated and refitted that old established hotel, so long and popularly kept and owned by Dougland Brown, in the Village of Gravenhurst, is now in a position to attend to the wants of the travelling and general public. Parties *en route* to the Muskoka District, will find "Fraser's" a comfortable stopping place. The Bar and Larder are well furnished. Convenient Sample Rooms for Commercial Men. Good stabling and attentive hostler. Free 'bus to and from trains and steamboats, b26

Market Reports.

OFFICE OF THE CANADA LUMBERMAN,
PETERBOROUGH, April 12, 1881.

Although the spring movement has hardly begun yet, owing to the lateness of the season, the demand from the United States is good and most shippers have large orders to fill. The stock of last season's cut is rapidly disappearing in the chief centres of trade, so that those who held their lumber over are likely to realize good prices for every board they hold.

Montreal.

Ash, 1 to 4-in, ₱ M	$15 00@17 00
" square ₱ M	22 00@25 00
Basswood, ⅞-in, ₱ M	12 00@14 00
" 1-in., "	15 00@16 00
Black walnut, culls, ₱ M	55 00@60 00
" 2nd quality, ₱ M	85 00@90 00
" 1st "	100 00@105 00
Cedar, round,. p ft	0 08@ 0 10
" flat, "	0 08@ 0 10
" square "	0 10@ 0 10
Grey elm, 1st quality, ₱ M	20 00@25 00
Rock " "	35 00@40 02
Spruce, 1 to 3 in., ₱ M	7 50@ 8 00
" square, "	12 00@14 00
Red oak, ₱ M	35 00@40 00
Pine, clear, 1st quality, ₱ M	35 00@40 00
" 2nd "	20 00@25 00
" 3rd "	12 00@15 00

Chicago.

CHICAGO, March 30, 1881.—While the weather during the past week has been an improvement on that which has prevailed for several weeks previous, it has not brought the much needed relief in the melting of snow and the clearing away of obstructions to the successful prosecution of business. The country which is dependent upon Chicago for its lumber supply, is yet too much loaded with snow to enable the railroads to freely transport, or the yard dealers to handle, the stocks which the country demands, and as a result, while orders are reported in large volume, the railroads are unable to supply sufficient cars for the transportation of the ordered product. This seems just now the greatest drawback to trade, and we hear many dealers complaining loudly of their inability to fill orders on this account. Fears are expressed that customers will get impatient and recall their orders in many cases, although as the evil is one which is general rather than local, it is difficult to see how customers can better their condition by exhibiting an undue degree of impatience.

We hear no one venture to express a hope that the first cargo will, this year, put in an appearance before the middle of April, and few look for any arrivals before May 1, and it is hardly probable that navigation will be fully open before the middle of that month. This will have the effect to shorten up the season materially. Stocks are daily reducing, and many dealers are already anxious to obtain supplies. Prices are reported well maintained under the present list, but we hear of no suggestions looking to any further advance at present. —*North West Lumberman.*

STOCK ON HAND MARCH 1.

	1881.	*1880.*	*1879.*
Lumber	398,800,030	338,996,421	302,534,968
Shingles	166,010,000	152,072,000	165,959,000
Lath	41,784,270	37,132,219	33,387,220
Pickets	2,251,438	1,467,974	691,570
Cedar posts	177,304	217,362	342,700

YARD QUOTATIONS—CAR LOTS—DRY.

FINISHING LUMBER—ROUGH.

1st, 2d clear, 1, 1¼ and 1½ in	$43 00
1st and 2d clear, 2 in	45 00
1st and 2d clear, 3 in	50 00
3d clear, 1¼, 1½ and 2 in	38 00
7 and 8 inch clear	32 00
Select 1 in. A	32 00
Select B	22 00
1¼, 2 in. B	26 00
7 and 8 in. B	26 00
Clear and Select 2x4	28 00
2x6 and 2x8	32 00

All one length $1 extra.

WAGGON-BOX STUFF.

3-in and up. A	$43 00
4-in. and up. B	37 00
14-in. and up. C	28 00
D	17 00

All 14 feet $2 extra.

STOCK BOARDS.

12 in. A, 12 to 16 ft	$37 00
12 in. B	33 00
12 in. C	28 00
12 in. D, 12, 14 and 16 ft	17 00
12 in. D, 18 ft	19 00
12 in., 20 ft	20 00
10 in. A	35 00
10 in. B	30 00
10 in. C	24 00

COMMON BOARDS—ROUGH.

	Dry.
Common boards, 12 in	$15 50
10 and 20 ft	14 50
12, 14, 16 and 18 ft	14 00
Culls, all lengths	11 50
1¼ and 1½ com	13 50

TIMBER AND DIMENSION—DRY.

Small timber, 18 ft. and under	$12 00
12, 14, 16 and 18 ft. joist	13 00
2x4, 10 and 20 ft	14 00
2x4, 18 ft	13 00
20 feet	14 00
22 feet	17 00
24 feet	17 00
26 feet	20 00
28 feet	20 00
30 feet	20 00
2 in. cull plank, all widths	9 00
2x4 culls, all lengths	9 50

SHINGLES—16-INCH—DRY—CAR LOTS.

Clear	$3 25
Extra A	3 00
Standard A	2 90
Cedar shingles	$2 00@2 50

Ends of cars and less than car load lots, five cents per thousand extra. The shingles handled in the Chicago market are all 16-inch.

PICKETS—LATH.

Flat, select and clear, d. and h	$20 00
Square, d. and p	20 00
Flat, rough, good	15 00
Flat, rough, common	11 00
Dry lath	2 25

CEDAR POSTS AND POLES.

Sawed ½ of 6½ in., 7 ft	$19 00
½ 6 " 7 ft	10 50
½ 7 " 7 ft	12 00
½ 8 " 7 ft	16 50
½ 8 " 7 ft	9 00
½ 9, 10, 11 and 12 in., 7 ft. long	12 00
4 in., round, full length	12 00
5 " " "	16 00
6 " " "	20 00
7 " " "	22 00
8 " " "	30 00
10 feet, per inch	6 00
12 " "	9 00
14 " "	10 00
16 " "	$11 00@13 50
20 " "	16 00

Albany.

Quotations at the yards are as follows :—

Pine, clear, ₱ M	$48 00@60 00
Pine, fourths	43 00@55 00
Pine, selects	38 00@45 00
Pine, good box	17 00@28 00
Pine, common box	14 00@17 00
Pine, 10-in. plank	38 00@42 00
Pine, 10-in. plank, culls	21 00@23 00
Pine boards, 10-in	25 00@28 00
Pine, 10-in. boards, culls	17 00@18 00
Pine, 10-in. boards, 16 ft., ₱ M	28 00@00 00
Pine, 12-in. boards, 16 ft	28 00@00 00
Pine, 12-in. boards, 13 ft	28 00@00 00
Pine, 1¼ in. siding, select	42 00@00 00
Pine, 1¼-in. siding, common	18 00@00 00
Pine, 1-in. siding, select	40 00@00 00
Pine, inch siding, common	16 00@00 00
Shingles, shaved, pine	6 00@00 00
" 2nd quality	4 50@00 00
" extra, sawed, pine	4 25@00 00
" clear, "	3 25@00 00
" cedar, mixed	2 75@00 00

Oswego, N.Y.

Three uppers	$42 00@45 00
Pickings	32 00@35 00
Fine, common	20 00@25 00
Common	14 00@16 00
Culls	12 00@14 00
Mill run lots	17 00@22 00
Sidings, selected, 1 inch	32 00@34 00
" 1¼ inch	30 00@38 00
Mill run, 1x10, 13 to 16 ft	17 00@21 00
selected	20 00@25 00
shippers	15 00@16 00
Mill run, 1 and 1¼ inch strips	15 00@18 00
Culls, selected	22 00@30 00
Culls	12 00@14 00
1x6 selected for clapboards	24 00@35 00
Shingles, XXX, 18 inch, pine	3 50@ 3 75
XXX, 18 inch, cedar	3 00@ 3 50
Lath	1 50@ 1 75

Tonawanda.

CARGO LOTS—MICHIGAN INSPECTION.

Three uppers	$33 00@40 00
Common	17 00@19 00
Culls	11 50@12 00

Glasgow.

It will be observed from the import list that our market continues to be well supplied with pitch pine, about 3,000 loads having arrived at Clyde ports during the past week. This wood has rapidly grown into favor, being clean and of large dimensions. It is now indispensable for our ship-building, etc.

AUCTION SALE.

On the 15th inst., at Glasgow, Messrs. Singleton, Dunn & Co., brokers :—

Miramichi yellow pine deals (mixed qualities)—

9 to 21 ft.	19/21×3	1s. 4d. p. c. ft	
9 " 21 "	17 18×3	1s. 2½d.	"

Saguenay 2nd quality red pine deals—

	10 to 18 ft.	7 11×3	10½d. "
Do. 3rd	10 " 15 "	8×3	10½d. "
Do. "	10 " 21 "	7×3	10d. "

Saguenay yellow pine deal ends—
4 to 8 ft. 7/9×3 10½d. and 10½d.

Do. spruce planks—

11 to 25 ft.	9/11×2	11½d. p. c. ft.
10 " 13 "	9×2	11½d. "
14 " 25 "	8÷2	11d. "
10 " 14 "	8×2	10½d. "
15 " 25 "	7×2	11d. "
11 " 14 "	7×2	10½d. and 10d.
14 " 21 "	6×2	11½d. p. c. ft.

Do. spruce plank ends—
4 to 8 ft. 6/8×2 9½d. "

Richibucto spruce deals—
14 & 15 ft. 8×3 10½d. and 10d.
19 to 25 " 7×3 10½d. p. c. ft.
15 " 18 " 7×3 10½d. and 10d.
14 & 17 " 7×3 9½d. p. c. ft.
9 to 14 " 7×3 9½p. "

Do. spruce battens—
14 to 23 ft 7×2½ 10½d. "
12 & 13 " 7×2½ 10½. & 10d.

Liverpool Timber Sales.

On Wednesday last Messrs. James Smith & Co. held their auction sale. There was a numerous attendance, both at the sale and at the luncheon which preceded it, but the majority of actual buyers were local merchants, only a few country dealers being in the list. The goods offered consisted of one cargo of Savannah pitch pine hewn timber and deals, one cargo of Pensacola sawn pitch pine timber and and deals, and one cargo of Miramichi spruce deals ; also to be sold without reserve a cargo of Bay Verte spruce deals, 320 pieces Quebec 2nd quality pine deals, 3,000 Halifax spruce deals, 297 logs of Quebec oak, and sundry other goods.

The hewn pitch was offered first, but did not meet with much demand, and only about 70 logs out of 168 were sold at from 16d. to 19d. per ft.; but the planks, 1,500 pieces, were withdrawn. The cargo of Pensacola sawn pitch pine timber, averaging 31 ft. cube, was all sold as follows :—

20 to 45 ft. 14 to 18 in. deep,	17½d. per ft.
19 " 43 " 14 " 17 "	17½d. "
24 " 46 " 12½ to 13½ "	15½d. to 16d. "
40 ft. and upwards, 12 in. and under,	16d. "
All under 40 ft. 12 "	15d. to 15½d. "
Pitch pine planks, chiefly 4×9 to 12,	15d. "
" " 3×11 to 13,	14d. "
" " 3×9 & 10,	13½d. "

The Richibucto spruce deals sold as follows :

		£.	s.	d.		£.	s.	d.
15 to 24 ft.	3×11	7	7	6				
12 " 14 "	3×11	6	17	6				
9 " 11 "	3×11	6	10	0				
16 " 24 "	3×10	7	0	0				
9 " 15 "	8×10	6	17	6				
16 " 27 "	3×9	7	2	6				
13 " 15 "	3×9	6	15	0	to	6	17	6
9 " 26 "	3×8	6	10	0	"	6	12	9
9 " 26 "	3×7	6	12	6	"	6	15	0

The goods offered without reserve sold as follows :—

		£.	s.	d.
Spruce deals, Bay Verte—				
15 to 19 ft.	3×11	7	2	6
10 " 14 "	3×11	6	15	0
9 " 21 "	3×9 and 10	6	15	0
16 " 28 "	3×8	6	15	0
12 " 15 "	3×8	6	12	6
16 " 25 "	3×7	9	17	6
12 " 15 "	3×7	6	12	6
9 " 18 "	3×12 and 17	6	17	6

Quebec 2nd pine deals, 9 to 16 ft., chiefly 3×11, 13 and 14, £14 10s. to £14 12s. 6d.
A parcel of American wainscot oak billets, 2s. 8d. per foot.
157 oak planks, 3×10 to 16 in., 22d. per ft.
269 Quebec 4th pine deals, £6 15s. per standard.
505 " " deal ends, £5 7s. "
3,116 Halifax spruce deals, 3×7 and 3×9, £6 15s. to £6 17. 6d. per standard.
Palings, 5 ft. 3×1, £3 10s per 1,200
" 4½ ft. £2 "

HEADACHE.—Why become a suffering martyr to Headache, when BURDOCK BLOOD BITTERS will surely cure the cause of all varieties of Sick and Nervous Headache, cleanse the system, regulate the secretions, relieve constipation of the bowels, purify the blood, renovate the liver and tone up the nervous system, and distressing headache will be unknown. Sample bottles 10 cents Large bottles $1.00.

S. R. WARREN & SON,
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Specifications and all information promptly furnished on application.

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with latest improvements, a specialty.

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Rodebaugh's Saw Frame, Mill Dogs and Saw Guides.

Water-works, the latest and most improved, made to Order.

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Plans and Specifications on application.

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AND
MACHINE WORKS.
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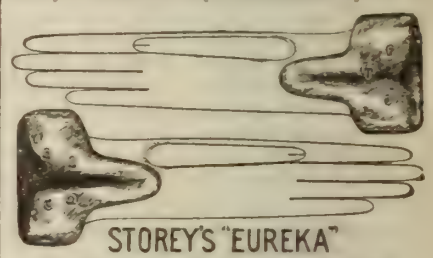
ACTON, ONTARIO,
GLOVE MANUFACTURERS.
The best description of GLOVES and MITTS in every variety of material and style manufactured by us. b15



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CHAS. M. LARSEN,
Manufacturer of all kinds of Lacquered and Enamelled Woodwork, Turning and Carving in
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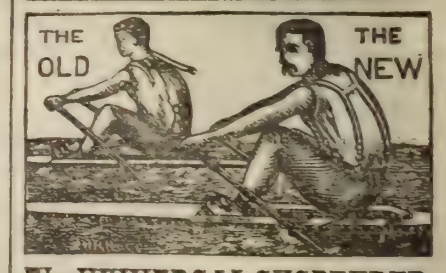
BILLIARD BALLS
Turned and coloured a speciality.
☞MEERCHAUM and AMBER GOODS repaired in first-class style. b17
77½ King St. West, Toronto, Ont.



The UNIVERSAL SUSPENDER.
SOME REASONS why they are the best:—
1st.—No Elastic required.
2nd.—Is slack when stooping.
3rd.—It never slips off the shoulders.
4th.—Sold at prices of common suspenders.
Manufactured by C. E. RAMAGE & CO.
b14 20 Queen St. East, Toronto.

Wrought Iron Shanty Cook Stoves

The Best Article ever offered to the Trade.

I have much pleasure in drawing attention to my **WROUGHT IRON COOKING STOVE, for Shanty, Hotel and Boarding House use.** These Stoves are made of **Heavy Sheet Iron,** the top and lining of the fire-box being of **Heauy Cast Metal** and all the connecting parts of substantial **Wrought Iron Work.** The dimensions of these Stoves are as follows :—

SINGLE OVEN STOVE

Top surface contains six 10-inch holes, with ample room between, and one oven 16 x 24 x 26.

DOUBLE OVEN STOVE

The Double Oven has a top surface containing twelve 10-inch pot holes, with two ovens, each 16 x 24 x 26. One fire-box of suitable size for area to be heated. Below will be found Testimonials from some of the leading Lumbermen, who have used my Wrought Iron Cook Stoves since I commenced manufacturing them. They are the names of gentlemen who are well known and reliable, and will carry more weight than any recommendation of my own could do.

The Best Stove I have ever Used.

PETERBOROUGH, May 31, 1880.

ADAM HALL, Esq., Peterborough. Dear Sir,—I have used your Wrought Iron Cooking Stove in our lumbering operations since its introduction here, and have no hesitation in saying that I prefer it to any other. For durability, economy and efficiency, where a large number of men are employed, it is the best stove I have ever used. You can, with confidence, offer it to hotels, boarding houses and lumbermen.

Yours truly, THOS. GEO. HAZLITT.

The Stove for Lumbermen.

PETERBOROUGH, June 1st, 1880.

ADAM HALL, Esq., Peterborough. My Dear Sir,—We have used your Wrought Iron Cooking Stove and find it is very satisfactory for lumber operations, especially so on drives. We can recommend it highly.

Yours truly, IRWIN & BOYD,

Gives the Greatest Satisfaction.

PETERBOROUGH, June 3rd, 1880.

A. HALL, Peterborough. Dear Sir,—I have had the Wrought Iron Cook Stove, purchased from you, in constant use ever since last fall, and it gives the greatest satisfaction in every respect. I can recommend them highly to any one who is in the lumber business. Very truly yours, GEO. HILLIARD, M.P.

EVERY STOVE GUARANTEED

All the necessary TINWARE and CUTLERY for Shanties supplied at the Lowest Prices.

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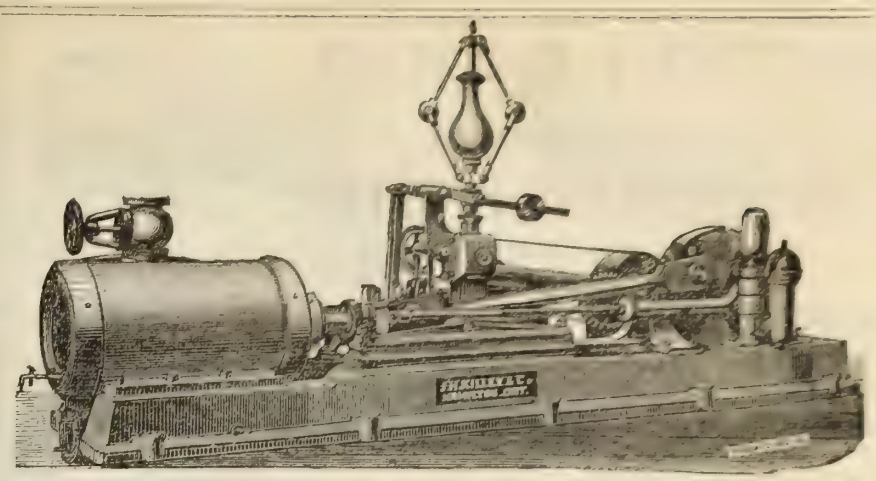

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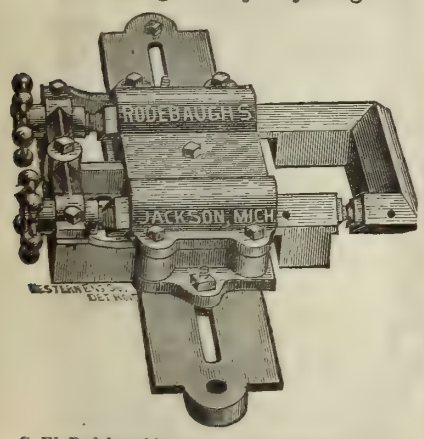
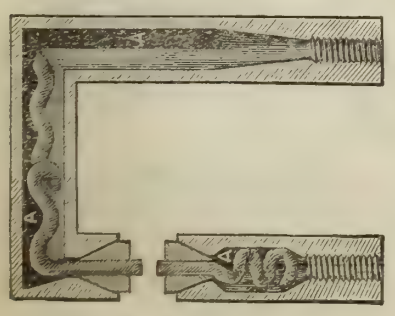


G. W. Rodebaugh's patent Saw Guide will recommend itself to every practical sawer. All that is required is a trial.



No heating of Saws. No danger in setting. Trial free of charge. ☞The whole complete only $25. Manufactured in Canada by

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CROSS-CUT SAW!

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None genuine that are not like the above cut, with registered trade mark with the word "The Lance," and Maple Leaf with our name. Price $1 per foot.

CAUTION.—Beware of Counterfeits. There are inferior counterfeits on the market, which are intended to be sold at a high price upon the reputation of this saw. We will send to any address a saw exactly like any counterfeit, warranted equal in quality or no sale, at 60c. per foot. Therefore do not be humbugged into paying a first-class price for a second-class saw. A fact to bear in mind is that if the material and temper are not of the very best quality the shape of the teeth amounts nothing. A saw, like a knive, will not cut fast without it will hold a keen, cutting edge. We have cut off a 14-inch sound basswood log in eight seconds with this saw. Manufactured only by

SHURLY & DIETRICH,

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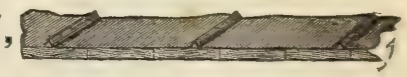

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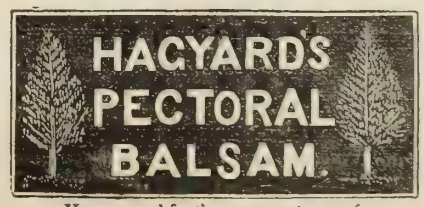

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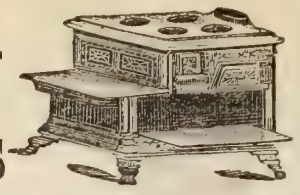

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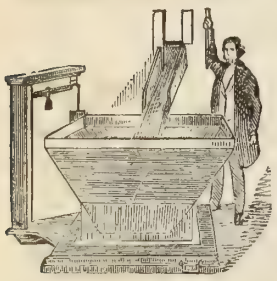

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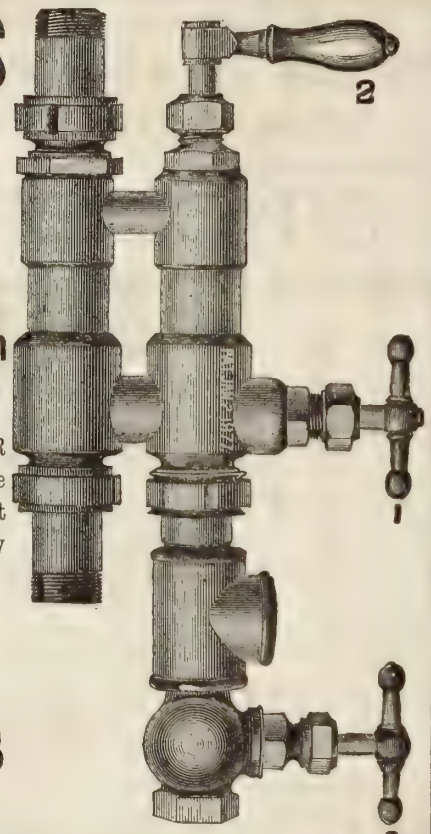

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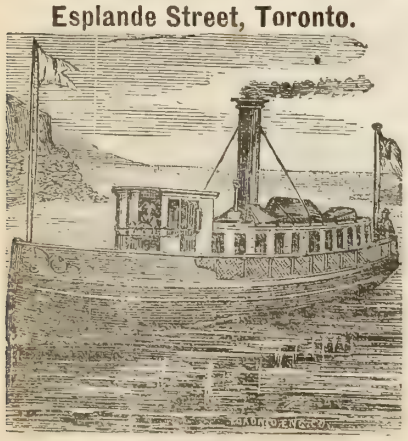

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BARREL MACHINE

One man and two boys can turn out

One Hundred and Fifty First-class Flour Barrels in Ten Hours,

made from veneered wood of two thicknesses. The inside is one solid sheet of veneer running around the barrel, making in reality one hoop from top to bottom, and in the outside thickness the grain is reversed, running up and down, finished with five hoops two inches wide, reversed again, making the barrel almost three thicknesses, which gives the package superior strength, tightness and durability over the ordinary hand-made flour barrels, yet with all its many advantages cost less than the old style of package. My barrel machine is arranged to make all sized packages from a large barrel down to small nail kegs, butter packages and cheese boxes. I am open to prove at any time the superior strength of my barrel. That one will stand more hardship by any actual test than one hundred of the old ordinary flour barrels. County rights for sale, and all information given by applying to

JAMES TOMLINSON, Patentee,

113 KING ST. EAST, TORONTO.

We are Prepared to Supply

LUMBER MERCHANTS

WITH

READY-MADE

CLOTHING

GENT'S

FURNISHINGS

Blankets, &c.

In such Quantities as may be required at CLOSE

Wholesale Prices

FOR CASH.

PETLEY & CO'Y.

GOLDEN GRIFFIN,

128 to 132, King Street East,

b12 TORONTO.

This cut is a simile of Package.

The greatest tribute to its extraordinary merits is, that it was awarded First Prize and Diploma at

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Hamilton " "
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over all other yeasts.

TRY IT, AND BE CONVINCED.

Ask your Grocer for it, or send direct to the factory. PEARL YEAST COMPANY, 39 Front Street, Toronto, Box 1264, b15

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Irish Canadian Office.
TORONTO, Feb. 21st, 1881.

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Heavy Circular Saw Mills

and for STEAM MILLS, would recommend the Steam Feed, having put in several which are giving the best of satisfaction, as will be seen by the following testimonials:—

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Yours respectfully,
WILLIAM TAIT,
Lumberman, Gravenhurst.

TORONTO, August 11th, 1880.

WM. HAMILTON, Peterborough, Ont.

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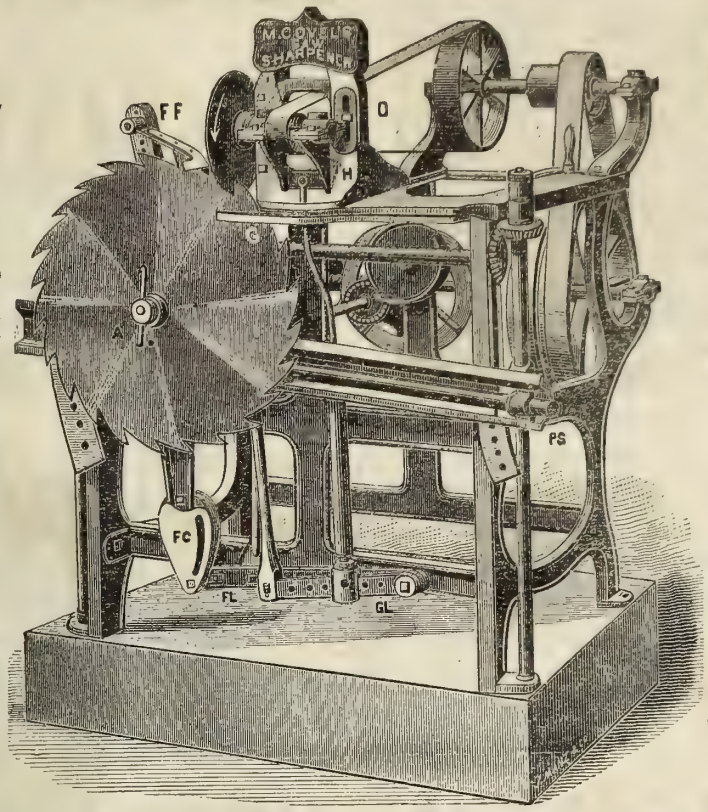
THOMPSON, SMITH & SON.



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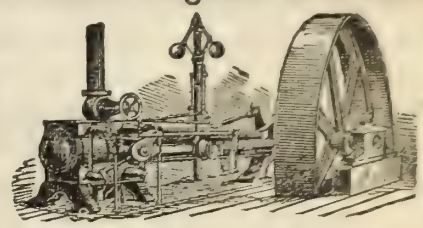

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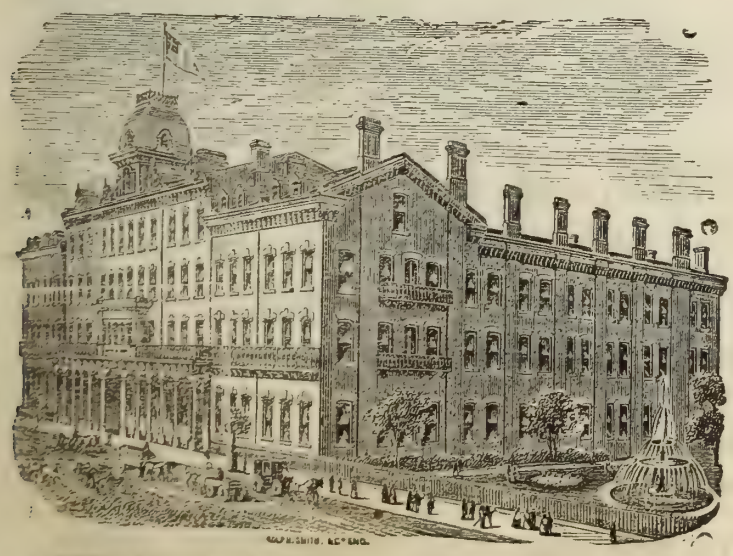

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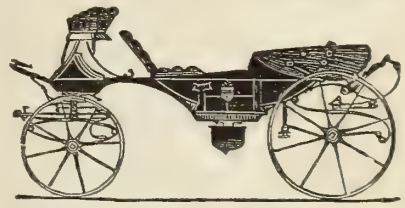

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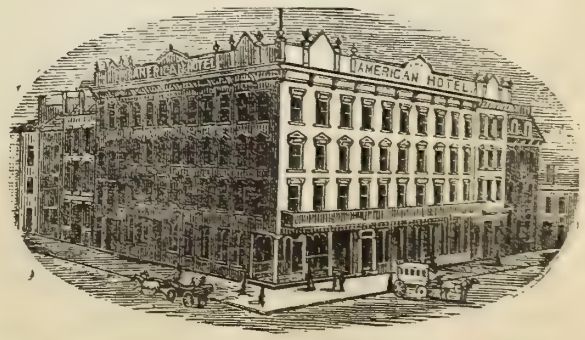

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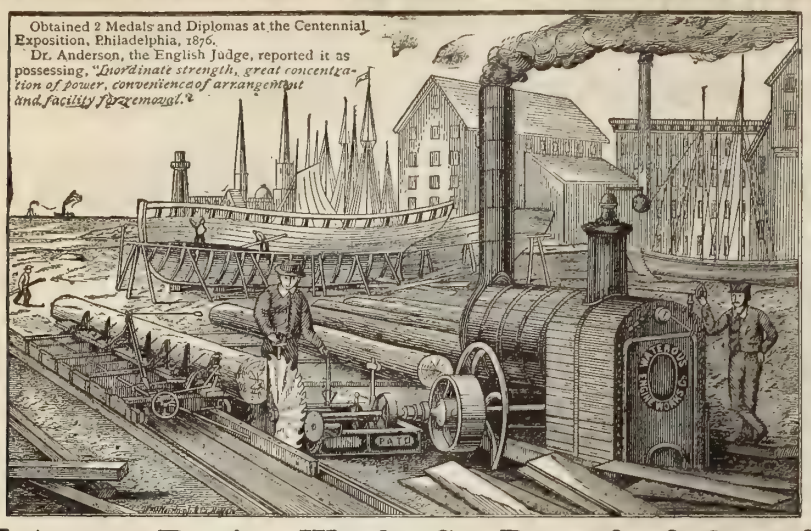

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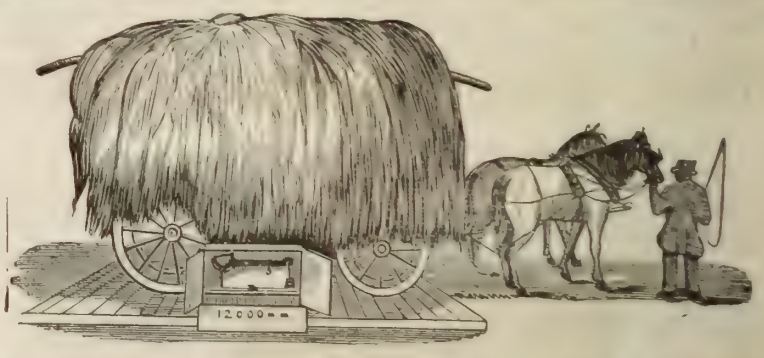

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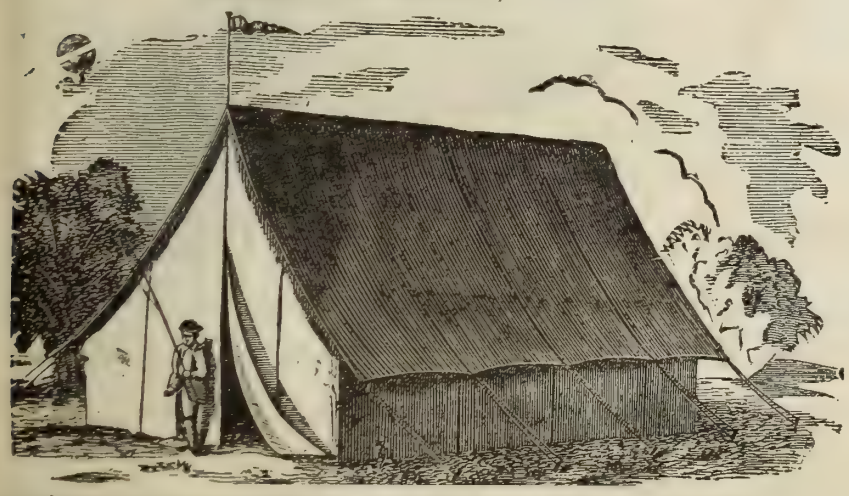

manufacturers of Tents for Lumbermen, Sportsmen, Camp Meetings, Photographers, Lawn and military Encampments, with or without extra roofs, all sizes and styles, white or fancy striped, Mildew proof or plain. Prices from $5, upwards. Flags of all descriptions, (regulation sizes) made of the best of silk-finish bunting. CAMP BEDS (Bradley's Patent) the best bed ever invented; size when folded 2 x 6 in.; 3 feet long, weighing only 11 pounds, but strong enough to bear the weight of any man. Waterproof wagon and horse-covers, tarpaulins sheets, coats and leggings of every description made to order on the premises. ☞Special rates to Lumbermen. Send for catalogue and price list to

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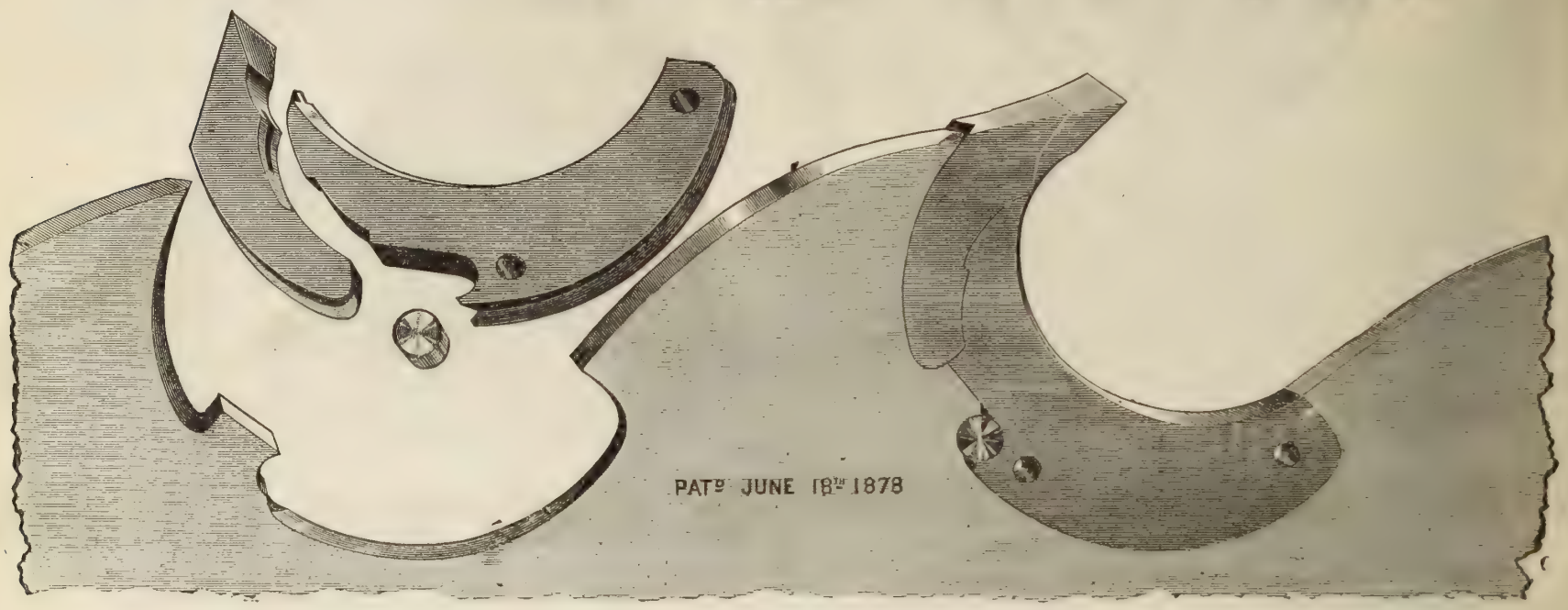

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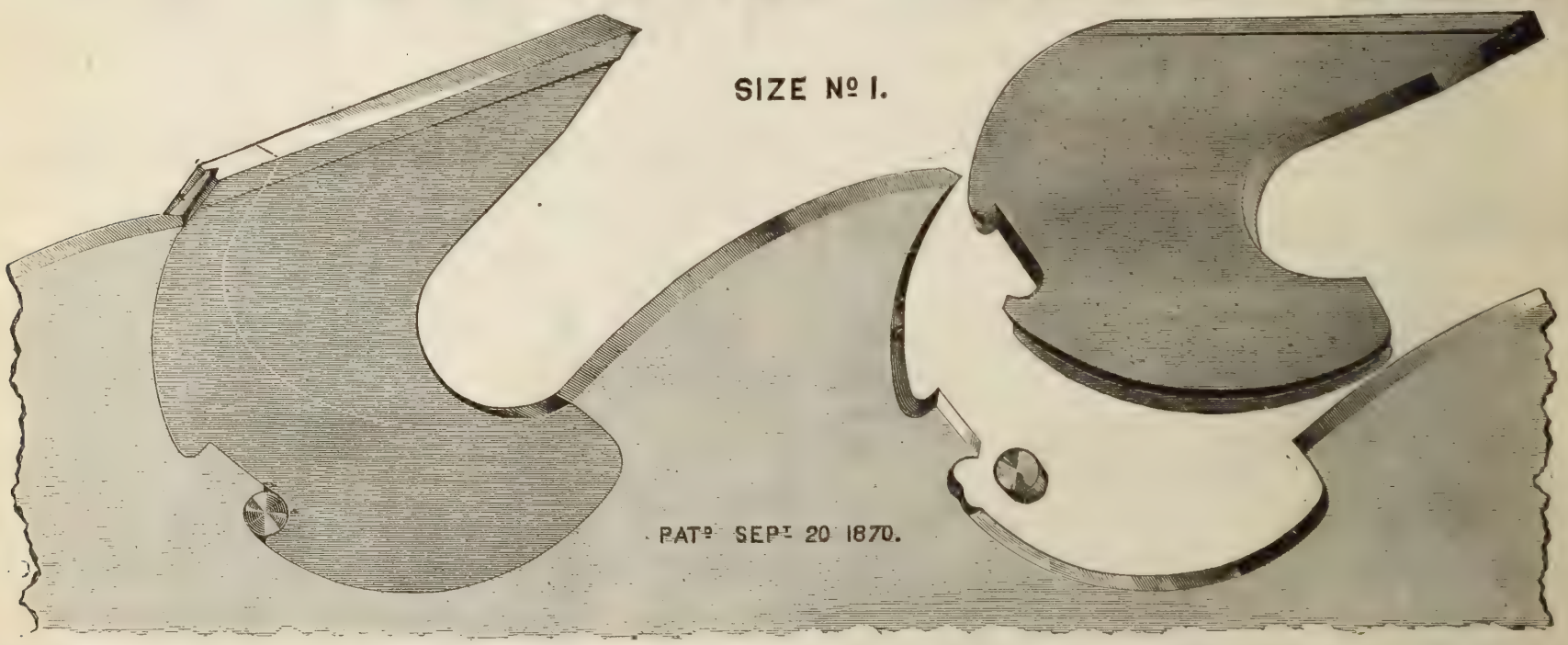
THE "TRENTON TOOTH" SAW.



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THE CANADA LUMBERMAN

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PUBLISHED SEMI-MONTHLY.

The only Newspaper devoted to the Lumber and Timber Industries published in Canada.

SUBSCRIPTION $2.00 PER ANNUM

VOL. 1. PETERBOROUGH, ONT., MAY 2, 1881. NO. 13.

FORESTRY AND ABORICULTURE.

BEING THE FOURTH CHAPTER OF THE REPORT OF THE ONTARIO AGRICULTURAL COMMISSION.

Tree Planting—Ages and Dimensions of Trees.

Hitherto, the observations made have applied more particularly to the case of persons owning timbered lands of lesser or greater extent, and to whom the economical handling and management of their bush is of very great importance. The subject of tree planting will next receive some attention. It is probable that not a few farmers neglect the work of planting forest trees from the notion that their growth will be so tardy as to make the outlay of time and a little money worthless to them in their day and generation. The idea of handing down a fine estate to their sons is not so constantly present to the minds of Canadian farmers as to those of men in older countries, and a craving to achieve—even at some loss—immediate returns, is one of the weaknesses of the times. But it is possible to show not only that very speedy benefits of a practical nature may be conferred by tree planting on the soil itself, but also that, in actual money receipts, the investment will in a few years be a paying one. Horace Greeley has some very excellent advice to give under this head, and it may not be out of place to quote his utterances here. Greeley was, it will be seen, an advocate for the gradual substitution of new woodland plantations for the old forests—a very wise policy in most cases when carefully carried out. His first remarks are in that direction. He says:—

"I have said that I believe in cutting trees as well as in planting them. I have not said, and do not mean to say, that I believe in cutting everything clean as you go. That was once proper. It is still advisable in forest-covered regions, where the sun must be let in before crops can be grown; but in nine cases out of ten, timber should be thinned or culled out rather than cut off; and for every tree taken away at least two should be planted or set out.

"Why do not farmers infer readily, and generally, that growing indifferent timber where the best and most valued would grow as rapidly, is a stupid and costly blunder? It seems to me that whoever has attained the convictions that apple trees should be grafted, ought to know that it is wasteful to grow red oak, beech, white maple, and alder, where oak, hickory, locust, and white pine might be grown with equal facility, in equal luxuriance, provided the right seeds were planted, and a little pains taken to keep down for a year or two the shoots spontaneously sent up by the wrong ones.

"North of the Potomac and east of the Ohio, and, I presume in limited districts elsewhere, rocky, sterile woodlands, costing $2 to $50 per acre according to location, etc., are to day the cheapest property to be bought in the United States, even though nothing were done with them, but keep out fire and cattle, and, let the young trees grow, as they will. Money can be more profitably and safely invested in lands covered by young timber, than in anything else. The parent who would invest a few thousands for the benefit of his children, or grandchildren, still young, may buy woodlands which will be worth twenty times their present cost within the next twenty years. But better even than this would it be to buy up rocky, craggy, naked hillsides and eminences, which have been pastured to death, and shutting out cattle inflexibly, scratch these over with plough, mattock, hoe, or pick, as circumstances shall dictate; plant them thickly with chestnut, walnut, hickory, white oak, and the seeds of locust and white pine."

He then meets the difficuly above suggested. He says:—

"Many farmers are averse to planting timber, because they think nothing can be realized therefrom, for the next twenty or thirty years, which is as long as they expect to live. But this is a grave miscalculation. Let us suppose a rocky, hilly, pasture lot of ten or twenty acres, rudely scratched over as I have suggested, and thickly seeded with hickory nuts and white oak acorns only; within five years it will yield abundantly of hop-poles, though the better, more promising half be left to nature, as they should be; two years later, another and larger crop of hop-poles may be cut, still sparing the best; and, henceforth, a valuable crop of timber may be taken from that land; for, if cut at a proper season, at least two thrifty sprouts will start from every stump; and, so that wood will yield a clear income each year, while its best trees are steadily growing and maturing. I do not advise restriction to those two species of timber; but I insist that a young plantation of forest trees may and should yield a clear income in every year after its fourth."

In the Report of Dr. Hough, already referred to, and from which the quotation from Mr. Greeley is made, is a statement bearing upon the same subject, made by Mr. O. B. Galusha, in the course of a lecture delivered at the Industrial University of Illinois, in 1869. Mr. Galusha snys:—

"Let us estimate the expense of raising a growth of ten acres planted with white ash and black walnut, five acres of each. These varieties grow at about the same rate, and are about equally valuable for lumber.

"A good way is to plant in rows eleven feet apart, running north and south, and three feet eight inches (in the marks for corn). This will secure straight trees, being closer, and they may be thinned out to eleven feet each way when large enough to use for grape-stakes, bean or hop-poles. This will give 300 trees per acre, or 3,000 trees in all, allowing for some vacancies, though in all cases of tree planting, whether in groves or screens, a supply of good plants grown elsewhere should always be in readiness to use in filling vacancies, which should be done at the end of the first year.

"The preparation of the ten acres at $5 per acre would be $50. Average cost of seed, 50 cents per acre, $5. Planting, $25. The cultivation during the first five years will be paid for in the crops grown between rows. For cultivation from fifth to ninth years (four years), with horses only, $30 per year, $120. After this time no cultivation or care will be needed. This makes the entire cost, in seed and labor, of the ten acres of trees, $200. These trees will at twenty-five years of age, average sixteen inches in diameter at the ground, and about ten inches at the height of sixteen feet. This will give, deducting waste in sawing, 120 feet of lumber per tree. Allowing one-sixth for damage by the elements and loss from other causes, we have in round numbers, 360,000 feet of lumber, which, at $50 per thousand would amount to $18,000. The value of the tree tops for fuel would be equal to the cost of preparing the logs for the mill, and the expense in sawing would not exceed $5 per thousand. This, added to the cost of producing the trees, and the amount deducted from the value of the lumber, leaves $16,000 for the use of ten acres of land for twenty-five years and the interest upon the amount expended in planting and cultivating the trees. This statement may be deemed incredible perhaps, by those who have not previously turned their attention to the subject; but after much study and many years observation and measurements of growths of different varieties of trees, I am convinced that in all well-conducted experiments in growing artificial groves upon our large prairies, the profits will not fall far, if at all, short of the rates above stated."

As the owner of a large farm and other landed property, Senator Allan has taken a deep interest in this particular question. He has been able to fix with considerable certainty the exact age of several varieties of forest trees, and gives the results in the letter already referred to. What the size and quality of the tree may have been, and how far it would have been marketable at earlier stakes of its growth may be inferred from its measurements at maturity. The Senator says:—

"In enumerating the trees which I consider desirable for planting, I have named only those which could generally be obtained without any great difficulty or expense, in almost any part of Ontario, and I shall now give some data, which will show what growth these trees will attain within a specified time, taken from memoranda kept by myself, or which have come into my possession, and for the accuracy of which I am prepared to vouch.

"Elm trees taken from the woods as young trees of about 6 inches round the stem, and between 8 and 9 feet high, have attained, in forty-five years, a height and girth round the stem at 3 feet from the bottom, in several instances as follows: One 60 feet high, 8 feet in circumference at 3 feet from the ground: one 65 feet high, 8 feet 2 inches in circumference at 3 feet from the ground; one 60 feet high, 7 feet 9 inches in circumference at 3 feet from the ground. Another elm planted about fifty years ago, a small tree from the nursery gardens, has now grown to height of 70 feet, with a girth at 3 feet from the ground of 8 feet 6 inches.

"A red oak, planted as a sapling about forty-eight years ago, is now nearly 50 feet high, and measures 5 feet 8 inches round the stem at 4 feet from the ground.

"A maple of the same age, is 6 feet 5 inches round the stem, and nearly 60 feet high, and two others planted within the same period, are 6 feet in girth at four feet from the ground, and between 50 and 55 feet high.

"All three of these were, when planted in their present position, young trees about 6 or 7 feet high—just the size at which they can be most safely transplanted when taken from the woods.

"Of beech I have no record that I can entirely depend upon, but I believe one that I measured, which gave nearly 4 feet as the girth at about the same height from the ground, and was about 38 feet high, has been planted over forty years.

"A butternut between forty-seven and forty-eight years old, measured 6 feet round the stem (4 feet from the grouod), and has attained a height of 75 feet.

"Of two ash trees planted fifty years ago, on is 60 feet high, with a girth of 6 feet 5 inches; the other about 55 feet high, girth a little over 6 feet (3 feet from ground).

"It will be seen from this memorandum that the elm has made the most rapid growth of all these trees, and the maples come next; although the ash is close upon them.

"Of evergreens (native), I can only give with certainty the white pine. Two of these—both planted fifty years ago—have reached, one a height of nearly 70 feet; the other a little over 60 feet. One measures 6 feet 6 inches: the other a little over 5 feet, at four feet from the ground.

"It will be seen, therefore, that, within an averge of fifty years, trees transplanted at just such a size as they can be safely and conveni ently taken up when growing in the woods (say from 5 to 6, 8, or 10 feet high) have attained dimensions, which render them very valuable as firewood, as well as being perfectly sufficient for many useful purposes about a farm for which timber of a moderate size is suitable and requisite.

"I do not think that, with such facts as these, it can be said that there is anything visionary or impracticable in the means I have suggested for meeting the coming scarcity o timber in Ontario, and supplying the wants which will soon make themselves felt, even by

the present generation of farmers, and will certainly press heavily upon their children, if not provided for in some way or other."

On this very interesting subject, other witnesses before the Commission also gave evidence.

An indication of the periods at which hickory and walnut will be of marketable value may be obtained from remarks made by Mr. Beadle. He says :—

"Hickory trees might be planted quite close together, say three or four feet apart, with a view of thinning them out after they get as large around as a man's arm, because wood of that size would be valuable for many purposes. Black walnut would require to be planted farther apart, because they would be of no use until they were about as large around as a man's leg. Besides it is rather umbrageous in its style of growth, while the hickory is upright."

Mr. Beall, of Lindsay, has experimented with the black walnut. These trees, in fourteen years *from the seed*, have attained a growth of some eighteen to twenty-one inches in circumference, are twenty feet high, and have borne nuts for five years. He says :—

"I would consider black walnut the most valuable of all trees for forest planting. I know it will grow and succeed in this district. I do not know of any person who has grown it or attempted to do so but myself. I have about fifty very fine trees. I have some that will measure from six to seven inches in diameter, and are about twenty feet high. I have grown them from nuts planted in 1866. I know of no tree that will grow so easily, so rapidly and with so little trouble. The trees I mention are bearing nuts now, and I think I observed nuts on them five years ago."

Mr. Leslie says of the American elm and European larch :—

"The American elm, and European larch, would also be suitable for this purpose. The latter makes the best railway ties of any wood in the world, as it is almost indestructable. It is a very rapid grower, and in ten or twelve years' time the wood is of merchantable proportions, and useful for many purposes. Of course it would not be fit for railway ties by that time, but suitable for manufacturing purposes."

Of the butternut and hickory, he says :—

"The butternut is a very fine tree, and a quick grower, a little more rapid in its growth than the black walnut, and is useful in many ways. It makes capital wood for veneering. The hickory is hardy as far north as Peterborough, but is a slow grower, though it can be used for many purposes when three-quarters of an inch or an inch in diameter."

Mr. Caldwell, M.P.P., says on this subject:

"I would plant elm, maple, ash, and basswood, all fast growing trees, mingled with spruce and cedar as evergreens, as well as pine. I think an elm would be forty to fifty years in attaining to ten or twelve inches in diameter. The soil would have some effect on the growth, but I do not think that either ash, maple or basswood would grow much faster than the elm. A maple eight inches in diameter might be tapped for sugar; I think it would then be twenty-five to thirty years old. I have not experience enough to speak positively on that point. Lombardy poplars twenty-two years old, measured by me, are from six feet to eight feet four inches in circumference."

Mr. Henry Ives, quoted by Dr. Hough, gives, in the spring of 1876, his experience in a communication to the New York Farmer' Club. He says :—

"Five or six years ago, I planted two acres with four-year-old seedlings of white elm and soft maple into forest rows sixteen feet apart, and three feet apart in the row. Now the best of them are twenty feet high and twelve inches in circumference, and for thinning out the rows. I sell trees for more money than wheat would have brought grown for these years, and can continue to sell so until they are so large that I can take them for firewood, and I am growing a good crop of orchard grass between the rows. So that these trees in forest timber are paying as well, and are likely to pay as well for years to come, as any other acres on the farm. I am cutting now the second crop of wood, where the first or original timber was taken off about twenty-five years ago, and last winter 1,000 rails were taken by a neighbor from one-third of an acre of growth, besides a quantity of timber from the top, and timber not making rails. Another neighbor used nice black walnut lumber in building a fine farm-house, sawed from the trees he had helped to plant when a boy."

The value of the white ash has been specially noticed. In a paper, published in the Transactions of the Northern Illinois Horticultural Society, it is shown that, in a ten-acre plantation, raised from seed, at the end of twelve years, with good culture for the first four years, and proper soil, the grove would have 12,000 trees on the ten acres, averaging eight inches in diameter.

THE AUSTRALIAN TRADE.

Messrs. Gemmell, Tuckett & Co., of Melbourne, report under date of February 15th, as follows :

We have to report a steady demand during the month for most descriptions of building materials. The amount of business carried through at auction and privately has equalled our anticipations; and prices realized support late quotations.

Canadian Wood—The cargo ex Republic was placed at auction on the 11th inst. Spruce deals realized an average of about 3 7-16d. per foot of 9x3; clear pine 2 inches, £17 12s. 6d., and 12x1, £14 per M. super.; 6x$\frac{7}{8}$ spruce t. and g. flooring, 8s. 3d. per 100 feet lineal, being an advance on recent rates. The cargo ex Undaunted, from St. John's was offered at auction on the 4th inst. Prices not being equal to vendor's limits, the bulk was withdrawn.

Messrs. C. S. Ross & Co., of Melbourne, also report as follows :

Spruce Deals—Imports—Canada and United States, 50,027 pieces; United Kingdom, 5,219 pieces. The principal arrivals have been the Veritas, from London; Republic, from Saguenay, and Undaunted from St. John. The Undaunted arrived via. Adelaide, and it is inexplicable (in face of the bulk of the cargo ex R. B. Fuller having been sold in December last at an average of 3$\frac{3}{8}$d. per foot. 9x3), why her cargo was not discharged in that port. The offerings for the past four weeks have been parcels of 4,000, ex Veritas, which being held far above market, resulted in sale of 600 pieces only; cargo ex Undaunted resulting in sale of 1,800 boards, at from 4d. to 3$\frac{1}{2}$d., and 8,922 battens, at from 3 1-16d. to 3d. per foot, 9x3; and all the spruce deals and boards in the Republic at from 3$\frac{3}{4}$d. to 3$\frac{1}{2}$d. per foot, 9x3. The imports for seven months foot up 119,729 pieces, 30,000 pieces more than has been landed here during any year for past seven, and 600,000 pieces more than the annual consumption.

A NEW DEPARTURE IN THE TIMBER TRADE.

The Ottawa correspondent of the *Globe* writing on April 18th, says that there has been no rain in this section for six weeks. The water in the Ottawa and its tributaries is in consequence very low, and there is felt to be considerable doubt as to the logs and timber cut during the winter being got down. Arrangements have been made by the Scotch Lumber Company with the Canada Central and Occidental Railway Companies for the shipment of their entire winter's cut of square timber on the Temiscamingue from Mackay's Station to Quebec, a distance of 475 miles. It is stated that the rate of freight agreed upon is five cents per foot Special trains will mauage the service, as there will be some twelve hundred car loads in all. Business on the railway lines named will thus continue to boom right along. This shipment of square timber by rail from the limits through to Quebec marks a new era in the trade.

OTTAWA.

Mills at Work.—Gilmour & Company's steam mills commenced work on Monday afternoon. They give employment to several hundred hands.

Navigation Opened.—The Lower Ottawa Navigation Company's passenger steamers commenced their regular trips on Monday last.

Shipping.—Lumber shipping has commenced in real earnest.

Busy in the Yards.—The Chaudiere yards are all bustle and excitement.

THE U. S. TIMBER CENSUS.

Chicago, April 16.—Since the announcement that the census will report only 81,650,000,000 feet of standing pine in the three States of Michigan, Wisconsin and Minnesota, the log cut of this season becomes a question of much interest. Admitting the correctness of the Government figures, a simple calculation shows that the lumber industry of those States at its present volume will extend over a period of only twelve years. Take into account the natural increase and the years will be reduced to ten. Such calculations would be more interesting had not Maine many years ago been set down as a State whose forests in a few years would be cut away; yet to-day she is as much of a pine tree State as ever, and is producing as much lumber as she ever did, though of an inferior quality. Still more interesting would the calculations be were it not that the figures were made largely by pine land owners, who are not likely to take the "bear" side of the question when their own interests are at stake.—*N. Y. Tribune.*

WESTERN ONTARIO TIMBER.

The Ailsa Craig correspondent of the London *Free Press* says :—Large numbers of men are now at work rafting, and will find full work all summer. The quantity of timber got out in Western Ontario the past winter is the largest for 20 years, and the prices paid the highest during that period. Many supposed that the supply of timber was exhausted, but it would seem that there was a large reserve. Many farmers who have been holding for fancy prices for a long time parted with their trees this season. The railways will have a busy time moving the accumulations at the several depots.

Elm, oak, cherry, pine, ash, beech, walnut and birdeye maple are the varieties of timber got out this season. Elm is scarce, also ash. Walnut is fairly exhausted. Holders of pine are obliged to part with it, as the old trees are dying. Another season like the last will certainly finish the timber business in Western Ontario. It will be almost impossible to repeat the transactions of the past winter.

Two Thousand Dollars.

The easiest, cheapest and best way to secure the above amount is to apply for membership in the Mutual Benefit Association of Rochester, N.Y. Pay Dr. S. B. Pollard, 56 Bay Street, one dollar for four medical examinations, he will send your application to the head office, if you are accepted as a member they will issue a certificate of membership, which, on payment of eight dollars, entitles you to full benefits as a member, should you die to-morrow, next day, next week, next month, or any time within three months, this Association will pay to your heirs, or assigns, the sum of two thousand dollars. At the expiration of the three months all you have to do is to pay your pro rata amount, which is from 20 to 75 cents on the death of some other member, who has done nothing worse than to die during the three months just past. By paying your assessments on deaths, you keep your certificate alive, and at the commencement of the second year you are assessed two dollars per thousand to keep up office expenses, etc., for the next year. No easier, surer or better schemes to carry two thousand dollars has ever been devised than the Mutual Benefit Associates, of Rochester, N.Y.
5-l-13

Messrs. R. Collart & Co., of Liverpool, say that the stock of yellow pine timber is about double that held at the same time last year, but the deliveries from the yard have been on a fair scale; sales have been by retail only. The consumption of red pine has increased, but the stock held is excessive. For oak there has been less inquiry, and the consumption compares unfavorably with the very large consumption of the corresponding month last year, but the stock is not heavy; there are no sales to report. Elm and ash have been in fair request during the month. The stock of Quebec pine deals consists of 10,088 standards, against 4,033 standards at the same time last year; the consumption has been small, and prices are barely maintained. Birch is heavy in stock, but the consumption during the month has been on an increased scale.

LUMBERING IN NEW BRUNSWICK.

A correspondent of the Montreal *Herald*, writing from Newcastle, sends a report of the lumber operations in the Miramichi district for the present season. He estimates the amount cut this year on the north-west and south-west branches and the Lower Miramichi at 112,000,000 feet of lumber—13,000,000 feet less than the estimate already published. He states that quite a large percentage of the quantity credited to the south-west Miramichi was cut last season but "hung up" by the lowness of the fall freshet, and should, therefore, not be included in the estimate. The most of Mr. William Richard's drive was "hung up," and other lumbermen had more or less logs left in the streams. The quantity of logs cut on the south-west branch this year our correspondent places at 52,000,000, which is 8,000,000 or so more than was cut in the winter of 1879-80. On the north-west he thinks 17,500,000 feet of spruce was cut —or 2,500,000 more than the previous year's harvest. On the main Miramichi he places the the quantity at 25,000,000—which would be an increase of 5,000,000 feet.

FOREST FIRES.

Ottawa, April 25.—Bush fires have started in this vicinity.

Boston, Mass., April 25.—Forest fires are raging in Woonsocket. Cumberland, and the adjoining townships.

Woonsocket, R. I., April 25.—Extensive forest fires are raging along the Providence and Worcester road near the towns of Woodstock, Cumberland and Lincoln, and hundreds of acres have been burned over. The damage will be heavy.

Middleton, N.J., April 25.—Forest fires have broken out in numerous places in this vicinity.

Milford, Pa., April 25.—Large forest fires are raging in Sussex county, N.J. Fires are reported in the back townships of Pike county doing considerable damage.

Little Rock, April 25.—A family named Dement camping on the mountains in Stone county were surrounded by forest fires, and a woman and two children perished. Dement was badly burned in endeavouring to rescu them.

New Brunswick Items.

Messrs. Hayford & Stetson have made extensive improvements in their, in a very large furnace, also a new boiler, making eight in all. The furnace will consume sawdust and other refuse. Their engine has been thoroughly overhauled, and the building generally repaired. They expect to cut about 12,000,000 feet this year. Much of their logs is now in the Fredericton booms and will be rafted as soon as possible. They start sawing some time next week.

Randolph & Baker's mill has been sawing steadily since March 30th.

The steam saw mill at Barnesville, K. C. which was owned by Samuel Currie, was burned to the ground on the 8th of April. A considerable quantity of lumber was also destroyed, The mill had only started the day previous, and the loss will be a severe one to Mr. Currie, who had no insurance. The mill and contents were valued at about $2,000.

Doing the Work Well.

The Canada Lumberman has come into new hands and we are glad to see that it is doing well the work which it proposes to itself, and for which there is ample room in the Dominion. Messrs. Toker & Co., of Peterborough, are the new proprietors of the paper.—*Canadian Illustrated News.*

They all do it.—Everybody uses "Teaberry" for the teeth and breath, the newest, brightest, cosiest little toilet gem extant. Try a 5 cent sample.

Dyspepsia.—Strenthen your digestion—tone the stomach for utilizing and assimilating every atom of food you take; the body needs it for strength and vigor. *Zopesa* cleanses the entire system, stimulates the Liver, keeps you regular, and able to eat ten-penny nails. Letters and postal cards come in daily, telling of cures and help from *Zopesa*, from Brazil. *Positive proof* of the health and vigor it gives in a ten cent sample. Ask your druggist.

In cases of Chronic Diseases which doctors have failed to cure, Burdock Blood Bitters has achieved its greatest triumph. All diseases of the Blood, Liver and Kidneys, Scrofula, Dyspepsia, Nervous Debility, Rheumatism, Piles, Female Complaints, and all forms of lost vitality, are promptly cured by this great renovating Tonic. Trial bottles only cost 10 cents.

Trade Notes.

Canadian.

THE Parry Sound mill commenced sawing on the 6th of April.

BUILDING operations in Montreal during the summer promise to be exceedingly active.

THE rate from Brockville to Oswego is 90 cents per 1,000.

THE average rate for lumber from Toronto to Oswego seems to be $1.25 per 1,000.

THE harbor of Duluth is not expected to open before the middle of May.

8,000,000 feet of lumber awaits the opening of navigation to be shipped from Parry Sound.

GODERICH rates are quoted fifty per. cent. higher than last year, and a charter has been made.

THE schooner *Denmark* has been loaded with timber at Toronto—an unusual proceeding as it is generally rafted.

A GENTLEMAN who arrived at Ottawa from the Black river on the 22nd of April, reports a foot of snow there.

THE saw mill owned by Alex. Carson, at Gorrie, was destroyed by fire on the morning of the 23rd April. Loss, $4,000; no insurance.

A FIRE in Hall & Brown's lumber-yard, Berlin, Ont., on the 18th April, destroyed $300 worth of lumber before it was subdued.

THE steam barge *Tecumseh*, has been chartered to take ties from Cockburn Island to Chicago at 10 cents each and cedar posts at 6½ cents each.

THE shipment of lumber from the Chaudiere docks commenced on Monday last. The quantity to be shipped promises to be larger that that of any previous season since 1872.

THE scow *Onward*, of Buffalo, has been chartered to carry five loads of about 160,000 feet each, from Port Hope to Wilson and Oak Orchard, N.Y., at the rate of $1.50 per 1,000.

THREE lumber barges are being built at Ludington, each 168 feet long, 36 feet beam on deck and 8½ feet deep in centre. They are to be towed by a steam barge and will carry 600,000 feet of lumber.

FOURTEEN lots of hop-poles, sufficient to make many car loads, have been deposited along the railway track east of the Trenton station. The poles are the property of Messrs. Rathbun & Son, and are intended for shipment southwards.

American.

THE Chicago *Tribune* says if the cheap rates on the railroads are continued, vessels may have to accept 4 cents per bushel for wheat to Buffalo.

THE Grand Rapids lumbering firm operating in Kent county, has bought a Monitor portable farm engine to use in loading logs upon cars in the pineries.—*Detroit News.*

HIRAM SIBLEY, of Rochester, N.Y., has purchased 9,500 acres of pine lands on the Au Gres River of D. Wright & Co., for the sum of $180,000, This tract it is estimated will furnish 100,000,000 feet of timber.

MR. G. W. HOLT, of Buffalo, manager of the commercial line of propellers, has concluded a a contract with the Grand Trunk Railway Company, according to which the boats of this line will carry during this season the up freight of the railway from Port Huron to Chicago. The contract, however, does not cover east bound freights.

THE *Northwestern Lumberman* says that maple flooring continues in good demand in Chicago, and we doubt if there will be much of it left in stock by the opening of navigation. There is some that comes by rail from Wisconsin, but the bulk of it reaches here by water from Michigan. The season of navigation will bring to light a large stock, but we look for it all to be wanted. Building operations will be exceedingly brisk in this city during the year, and maple flooring is constantly growing in favor.

A COMPANY has been organized for the purpose of constructing a railroad through the timber counties of Wisconsin, to be known as the Great Northern Timber Belt Railroad Company. The road will pass through the counties of Oconto, Shawano, Langdale, Marathon, Taylor, Chippewa, Lincoln, Price, Barron, Polk, Burnett and Douglas. The east end of the projected road commences at some point on Green Bay, either Oconto or Marinette.—*Lumberman's Gazette.*

LAST fall the lumbermen of Duluth organized a company to improve the St. Louis River, with a capital of $50,000. The contract to do the work was let to the well known railroad contractors, DeGraff & Co., of St. Paul, who have done a most thorough job. The river is now in fine condition for log driving, and there will be no difficulty in filling the mill booms at Duluth this spring from last winter's crop. We congratulate our Duluth neighbors upon their successful enterprise. Pluck, energy, enterprise and work win!—*Ashland Press.*

British.

THE deliveries of both hewn and sawn pitch pine have been large, and prices have been steady throughout the month; there has only been one cargo sale, the arrivals having been almost entirely on contract.

THE result of Messrs. Churchill & Sim's late sale is regarded as being generally satisfactory to holders of stock. Certainly the effect of the sale upon the better qualities of redwood stock is likely to be eminently satisfactory to holders.

MANY of the London agents are now on the coast, endeavoring to effect sales, but so far we do not hear that their efforts have been crowned with much success, as buyers are still holding off, in the expectation that prices may possibly come down. It is reported that two cargoes of Uleaborg deals and battens have been sold at prices decidedly low as compared with those ruling during the past season.

THE consumption of spruce deals has been about the same as last year, but stocks are too heavy for us to expect any early improvement in value; imports during the spring months, however, are likely to be on a very small scale compared with previous years, as stocks are unusually low at the shipping ports. Pine deals are moderate in stock, but the demand is limited. Birch, notwithstanding the large stocks, has fully maintained its value, but there cannot be much improvement until stocks are reduced.

"WHAT'S in a name? The rose by any other name would smell as sweet." We do not dispute that point with the poet, but certainly spruce, by any other name, does not sell as well as that which is called Quebec. The next in esteem seems to be that from St. John, N.B., which went at 30s. to £2 lower than Quebec, and Miramichi 10s. to a pound below that of St. John. It is true Miramichi pine deals went badly here, but that does not alter the case, for our Liverpool correspondent tells us there appeared to be no demand for pine deals at all, and very few were sold at the auction aforesaid, while here in London 1st bright Quebec pine deals went better than they have done for some time past up to £23 5s.

ONE of the noticeable eventualities of the great sale last week wss the way that Quebec spruce held its ground, in spite of the enormous quantity of other kinds thrown on the market, at the same time and place, to go at any price that could be obtained for it. It may be said that, instead of suffering from this competition, it beat it, and triumphed over it, for quite as good prices were obtained at this great sale as had been previously reached when smaller quantities were before the buyers to choose from. We have more than once expressed our regret at seeing 1st quality Quebec spruce of eligible dimensions going at £10 to £10 10s. per standard; but on this occasion such sizes and quality realized £10 15s., and 2nd quality went up to £9 5s., while some 3rd 3×11 obtained £8 15s. and nothing in short lengths and batten sizes went under £7.

Excellent Style.

We have received the March number of THE CANADA LUMBERMAN, published by Messrs. Toker & Co., of Peterborough. As this is the only Journal published in Canada devoted to the interest of lumbering in its various branches, we hope to see it receive that patronage which will enable the enterprising proprietors to continue its publication in the excellent style they have shown in the present issue. For neatness, clearness of print and quality of matter it will rank as high as any paper we have seen, which advocates the same business. Success to T. & Co.—*Omemee Herald.*

ZOPESA.—A healthy man never thinks of his stomach. The dyspeptic thinks of nothing else. Indigestion is a constant reminder. The wise man who finds himself suffering will spend a few cents for a bottle of *Zopesa*, from Brazil, the new and remarkable compound for clensing and toning the system, for assisting the Digestive apparatus and the Liver to properly perform their duties in assimilating food. Get a 10 cent sample of *Zopesa*, the new remedy, of your druggist. A few doses will surprise you.

Wanted.

A SECOND HAND DOUBLE EDGER; also a LATH MACHINE, both in good repair. Reply stating lowest cash terms or particulars to Box 1002, Peterborough. L10

For Sale.

A 40 INCH LEFFELL WHEEL and COMPLETE CIRCULAR RIG, all in good order, suitable for a fifteen foot head. Apply to Box 1002, Peterborough. L10

Reid & Co.,

WHOLESALE LUMBER DEALERS. Lumber, lath, shingles, &c. Car lots to suit customers. Best Culls in the market at from $6 to $7 per M.

OFFICE ON DOCK.—Esplande, foot of Shelbourne Street, Toronto b15

Hardwood Timber Land

FOR SALE.

FOR SALE, 1200 ACRES HARDWOOD TIMBER LAND near Nipissing Railway, Coboconk. Easy terms. OSHAWA CABINET CO., Oshawa. b13

Situation Wanted.

A Book-keeper of first-class experience desires a situation with a lumber firm. An opportunity of acquiring knowledge of the lumber trade more of an object than the amount of salary. Unexceptional references both as to character and ability.

b15 Apply to the Editor of THE CANADA LUMBERMAN.

The Stewart House,

Headquarters of Lumbermen in Peterborough, corner of Hunter and Water Streets. Good accommodation. Terms, $1 per day. Free 'bus at trains.

b15 T. CAVANAGH, Proprietor.

Allandale Junction Hotel

Travellers by Northern Railway have 15 to 20 minutes by all trains, for refreshments. Solid meals. Tea and coffee at counter. Fine brands of Liquors and choice Cigars. b17 E. S. MEEKING, Proprietor.

Orillia House,

ORILLIA.

New and Commodious Brick Building; best north of Toronto; splendid sample rooms; centrally located; free 'bus. b20 JOHN KELLY, Proprietor.

The Queen's Hotel,

TORONTO, CANADA.

McGAW & WINNETT, Proprietors. Patronized by Royalty and the best families. Prices graduated according to room. b20

St. Lawrence Hall,

PORT HOPE.

Is noted for its superior home-like comforts—a well kept table, equalling the best hotels in Toronto, and large, well-furnished rooms. Good sample rooms on ground flour. Walton Street, Port Hope.

b26 WM. MACKIE, Proprietor.

St. Louis Hotel.

THE RUSSELL HOTEL CO., Proprietors.

WILLIS RUSSELL, Pres., Quebec.

This hotel, which is unrivalled for size, style and locality in Quebec, is open throughout the year for pleasure and business travel. b18

Queen's Hotel,

BRACEBRIDGE.

JOHN HIGGINS, Proprietor. The proprietor (late of Georgetown,) having lately purchased the above hotel,) will endeavor to make it one of the best houses in the District of Muskoka. Tourists and hunting parties will receive every possible attention. Free 'bus to and from steamboat wharf. Terms, $1 per day. b20

Fraser's Hotel,

GRAVENHURST, ONT.

HENRY FRASER, proprietor, (successor to Dougland Brown.) Mr. Fraser having purchased and thoroughly renovated and refitted that old established hotel, so long and popularly kept and owned by Dougland Brown, in the Village of Gravenhurst, is now in a position to attend to the wants of the travelling and general public. Parties *en route* to the Muskoka District, will find "Fraser's" a comfortable stopping place. The Bar and Larder are well furnished. Convenient Sample Rooms for Commercial Men. Good stabling and attentive hostler. Free 'bus to and from trains and steamboats. b26

Flexible Board Rules,

With Steel Head, either Cleveland or London make, at $1.75 Each.

GEORGE STETHEM,

1L PETERBOROUGH.

Hotel Ottawa,

No. 21 North Side King Square,

ST. JOHN, N. B.

E. COSMAN, PROPRIETOR

Terms $1.00 to $1.50 per day.

TRUSSES.

CLUTHE'S PATENT SPIRAL TRUSS all attachments improved. No more buckles, all on solid brass casting. Book on rupture and human frame free. Send address in full post card. Best true information about rupture and deformities. CHAS. CLUTHE, Surgical Mechanist, 118½ King Street west, Toronto.

MAIL CONTRACT.

TENDERS, addressed to the Postmaster General, will be received at Ottawa until Noon, on Friday, 6th May, for the conveyance of Her Majesty's Mails, on proposed Contracts for four years, once, and three times per week each way respectively, between

Apsley and Cheddar, and Peterborough and Apsley,

from the 1st July next. Conveyance to be made in a public or other vehicle. Printed notices containing further information as to conditions of proposed Contract may be seen, and blank forms of Tender may be obtained at the Post Offices of Peterborough and Apsley.

GILBERT GRIFFIN,
Post Office Inspector's Office, Kingston, 25th March, 1881 } Post Office Inspector.
3L13

CHAS. M. LARSEN,

Manufacturer of all kinds of Lacquered and Enamelled Woodwork, Turning and Carving in

WOOD, HORN AND IVORY.

BILLIARD BALLS

Turned and coloured a speciality.

MEERCHAUM and AMBER GOODS repaired in first-class style. b17

77½ King St. West, Toronto, Ont.

THE RUSSELL HOUSE,

OTTAWA.

JAS. A. GOUIN, - - PROPRIETOR.

Is the Favourite Resort of Leading Public men of the Dominion attending the annual Session of Parliament.

Ministers of the Crown, Senators, Members of Parliament, Public Officials, as well as those having business with the various Departments of the Government. It is also the headquarters of those having dealings with the princely Lumber Manufacturers in the Great Pine Valley, of which Ottawa is the acknowledged centre.

THE RUSSEL HOUSE being central, almost abutting on the magnificant PARLIAMENT and DEPARTMENTAL BUILDING—the pride of the Country—is thus conveniently situated for those visiting the City on public business. But the location is also everything that could be desired alike for the man of business and the man of pleasure. A few minutes walk brings the guest of the Hotel within reach, not only of all the principal business resorts, but also of the most splendid Mountain and Valley Scenery that can be seen anywhere, as also of the two almost unrivalled Waterfalls—the Chaudiere and Rideau—and of the extensive Manufacturing Establishments and Depots of the leading Lumberman. But, besides the beautiful scenery, which, it may be mentioned, includes the magnificant Ottawa and two of its grand tributaries—the Rideau and Gatineau—there are in the immediate neighborhood, beautiful Lakes and apparently never-ending woods, which afford opportunities for the finest Fishing and Shooting that can be obtained on the Continent.

THE RUSSELL HOUSE affords excellent accommodation for 300 guests; its table is abundantly supplied with Viands of the choicest description, in season, and nothing is left undone to make every visitor feel comfortably "at home."

Omnibusses meet the Arrival of every Train and Boat. b26

"SPARE THAT TREE."

The *Lumberman's Gazette* says that when articles are written about the preservation of the timber of this country, they are always directed toward the consideration of the pine, and eloquent language flows from pencil points, and arrays of figures are marshaled to show how great is the urgency in that behalf. But the larger body of other sorts of timber is forgotten as of no consequence, or not subject to the depleting process. There is, nevertheless, and has been constantly going on since the first settlement of the country, a remorseless war upon the oak and ash, elm, poplar, hemlock, maple, and every other variety of wood growing in the grand forests with which this goodly land was covered. Thus far this waste has doubtless been unavoidable. To reduce the virgin land to fruitful fields the forests must needs be felled, for grain could not be grown under the branches of the trees. In the undeveloped condition of the western world there was no other course to pursue but to reduce even the best timber to ashes. Thus a vast offering in oak and ash and walnut, and every other goodly tree, was sacrificed on the log-pile of the settler to the spirit of development. There were no means of getting the timber to market had there been demand for it anywhere. But there is no longer a reason or excuse for the sacrifice. The land is divided by railroads almost as a farm by fences. There is scarcely ten miles of territory intervening between the lines of track in most of the northern and western states, and a mighty tonnage afloat upon our rivers, lakes and canals. Fifty millions of people now, and hereafter the mightiest nation the world has ever known, will require more timber than has ever before been used by any civilization that has preceded the generation of men now bustling in this restless world. Think of the multitudinous uses of timber, calculate the immense quantity required to meet the vast consumption. Figures need not be given. To say twenty billion feet does not convey any impression except of an incomprehensible number, but it is given as the consumption of American timber in 1880. Consider the uses of timber, the fifty millions of population in the United States, and estimate the value of timber twenty years from this date. Pine is not alone of value. Not a pine tree should be wasted, it is true, but it is equally true that he is a ruthless disregarder of the rights of posterity who needlessly and wantonly destroys an oak, an elm, a hemlock, an ash or a maple tree, or any other species of timber. The tide of development must roll northward over the peninsulas of Michigan and lay low her noble forests, but there need be no vandalism, no indifferent waste such as has marked the past. Be not in haste to denude the land. The hardwood of Michigan is to-day of more value than the pine, and it will increase in value as the years go by. The same is true of other states. The hemlock of every state where the tree grows is worthy of preservation; it is a useful timber wood and its value in some of the states will increase five fold within as many years. Let the old refrain be taken up, "Woodman, spare that tree."

IMPORTANT DECISION.

An exchange reports a decision by the Court of Queen's bench, for Ontario, involving the right of a landlord to seize upon the property of a third party, temporarily upon his premises, for the payment of rent. The suit was one for damages by the owner of certain sawlogs, which had been taken to a saw-mill to be converted into lumber in due course of the business of the mill. The defendant was the landlord of the premises, and distrained upon these logs to satisfy his claim for rent against the tenants. The court held this distress illegal, and the logs exempt from any liability. The court further held that it made no difference that one of the tenants appeared to have an interest in the sawlogs jointly with the plaintiff. This decision is of considerable importance to the large class of Canadians interested directly and indirectly in the lumber business, and it is a matter for congratulation that the courts have been able to hold these goods exempt. Their liability to seizure for rent would introduce a considerable element of uncertainty into this kind of business.

SPARK ARRESTERS.

There have been many devices offered to the public for the purpose of arresting sparks from chimneys, but like many devices for arresting the progress of sparks in every day life, the old original plan seems to work the best. This embraces a wire screen or bonnet, made either permanent with an enlarged arm above the stack, or with a hinge joint on a flat opening at the top. This latter is but a modification of the close top of the former, which, if of a small enough mesh to hold cinders, is apt to become clogged after a time, and prove annoying. The hinged opening at the top obviates this, so long as the wire rope connection with the ground, used for opening and closing the trap, remains intact, and when this is broken it is no great trick to restore it. A patent device embracing an inclined shelf inside the stack, so arranged that cinders removed from the direct influence of the upward draft would fall of their own gravity upon the shelf, which is connected on the outside of the stack with a pipe or area sufficient to pass them to the ground, has been tried by many mill men, but has not met with sufficient favor to come into extended use. Probably the best system of arresting sparks is found in so enlarging the area of the chimney that while a good draft is obtained, the heat will not rush up with sufficient velocity to carry cinders to the top. A small stack just large enough to create the required draft under the boilers, is a most prolific source of danger, as the velocity of the current of heated air is sufficiently great to overcome the gravity of the cinders. Tall, brick stacks of sufficient area, seldom emit cinders of a size to be dangerous to surrounding property. Give your stack a height and diameter exceeding the actual requirements of your grate surface, and you can find no more effective measure for arresting sparks, which, rising to a height where the current of air becoming somewhat weakened in its force can no longer overcome their gravity, fall into the ash pit at the rear of the arch. Confine the heated air to a small compass, and its force will invariably carry sparks or heavy cinders over the top of the stack.—*Northwestern Lumberman.*

SPEED OF CIRCULAR SAWS.

Nine thousand feet per minute, that is, nearly two miles per minute, for the rim of a circular saw to travel, may be laid down as a rule. For example, a saw 12 inches in diameter, 3 feet around the rim, 3,000 revolutions; 24 inches in diameter, or 6 feet around the rim, 1,500 revolutions; 3 feet in diameter, or 9 feet around the rim, 1,000 revolutions: 4 feet in diameter, or 12 feet around the rim, 750 revolutions; 5 feet in diameter, or 15 feet around the rim, 600 revolutions. Of course it is understood that the rim of the saw will run a little faster than this reckoning, on account of the circumference being more than three times as large as the diameter. The following table, which has been compiled as an authority on the subject, nearly covers the whole ground:—

Size of saw.	*Revs. per min.*
8 in	4,500
10 in	3,600
12 in	3,000
14 in	2,585
16 in	2,222
18 in	2,000
20 in	1,800
22 in	1,636
24 in	1,500
26 in	1,384
28 in	1,285
30 in	1,200
32 in	1,125
34 in	1,058
36 in	1,000
38 in	950
40 in	900
42 in	870
44 in	840
46 in	800
48 in	750
50 in	725
52 in	700
54 in	675
56 in	650
58 in	625
60 in	600
62 in	575
64 in	550
66 in	545
68 in	529
70 in	514
72 in	500

—*Industrial World.*

HAGYARD'S PECTORAL BALSAM; a few doses relieves the most distressing cough, and a twenty-five cent bottle has cured many a sufferer from Asthma, Bronchitis, Croup, Influenza, Hoarseness and Soreness of the Chest. It is the grand specific for all throat and lung complaints leading to consumption.

WILSON'S ELECTRIC LIGHT.

It will be of interest to lumbermen and saw mill owners, who operate on a large scale, to learn that Mr. T. L. Wilson, of Hamilton, Ont., has invented an electric machine which affords a steady light at a small cost, and is of simple construction. Reference has already been made in the LUMBERMAN to the advantages which would accrue to river-drivers should they be able to use the electric light during the night in sorting logs, as often during the day the weather is unfavorable. Mr. Wilson's invention will doubtless be suitable, as it only require a two-horse power to run the apparatus, which could easily be carried from place to place. An exhibition of the light was given in Hamilton lately and is referred to as follows by the *Times* of that city:—

"On approaching the building one was obliged to notice the bright illumination from the windows, which made posters on the adjacent fences as legible as in daylight. Mr. Sanford, who has taken great interest in Mr. Wilson's experiments, contributing the funds necessary for their carrying on, met the visitors and exhibited photographs printed by this electric light. The *Times* representative was able to read solid minion and nonpareil print without difficulty at a distance of twenty feet from the lamp. The apparatus is by no means intricate in design. The motive power is an engine running at two horse power, and the electricity is transmitted to the lamp through copper wire. The burner is made of coke and molasses, the parts being held in position by a clock-work attachment, which works automatically. Mr. Sanford explained that the apparatus was about one-fifth the weight and could be manufactured at much less cost than any electric machine in New York. The light, including carbons, which consume at the rate of 1½ inches per hour, and power from the engine, will cost about 2 cents per hour. One light like the one exhibited would suffice for a large floor of a warehouse or manufactory. By attaching the wire to a machine contrived for the purpose—and which occupies little space—about 85 per cent. of the original engine power can be utilized for any manufacturing work, rendering the apparatus useful by day as well as by night. The inventor has labored long and faithfully to perfect his invention, and it is understood that a proposition to organize a joint stock company for the construction of the machines, etc., will be laid before the citizens of Hamilton at an early day."

COMMERCIAL VALUE OF WOODS.

The following are furnished by Messrs. Oliver & Co., as the present prices for the different kinds of lumber on board cars on the different lines of railroad nearest to the mills. The prices given are, per thousand, board measure:

Walnut, best quality, according to thickness and lengths	$60 to $70
Walnut, common	50
" culls	30
Cherry, best quality, clear of hearts, large knots and shakes,	22
Butternut, " " " "	22
Whitewood, " " " "	21
Chestnut, " " " "	18
White Oak, " " " "	17
White Ash " " " "	17
Hickory, " " " "	16
Rock Elm, " " " "	13
Sycamore, " " " "	12
Balm of Gilead, " " "	12
Birch, " " " "	11
Black Oak, " " " "	11
Grey Oak, " " " "	11
Black Ash, " " " "	11
Basswood, " " " "	10
Maple, " " " "	10
Beech, " " " "	10
Soft Elm, " " " "	9

CEDAR—HEMLOCK—TAMARACK.—For railway ties from these woods the railway companies pay as high as from $20 to $30 per 100.

Really First-Class.

THE CANADA LUMBERMAN has changed hands, Mr. Begg having sold out his interest to Messrs. Toker & Co., who now issue that journal from their office in Peterborough. Under the new management the LUMBERMAN promises to be a really first-class paper, if we may judge from the first number sent out by them.—*Muskoka Herald.*

HUMBUG IN BUILDING.

There is a great deal of sham building in this country—building that is intended to catch the eye and give an appearance of solidity and finish which in reality it does not possess. Sometimes this kind of work is intentionally made, with a view to making cheap houses that will sell for a dear price, and sometimes it is furnished by the contractors on a contract, where they have engaged to put in good work but do not. Of course, where the owner sets out to build cheap and flashy houses, there is no one to blame but himself. But when a man contracts for good work and in place of it gets sham work, he certainly has good cause for complaint. But in very many instances there are extenuating reasons, which, while not exactly exculpating these builders who violate their engagements, furnish them with a partial excuse for their actions One of the chief causes for this kind of unfaithful work rests in the system of competitive bidding on jobs. A person desires to build a house, and forthwith he gets half a dozen carpenters and contractors to bid against each other for the job. These men, thus competing against each other, are, in nine cases out of ten, induced to put in their bid at figures below what good work, or work according to the specificaiions, can be done for. The result is that the party taking the contract at such ruinous terms begins to "cut the corners" at once. Whenever he can slight the work and not be detected he does it. He furnishes, when he can, inferior and cheaper material than he should, and in every way possible tries to make up for the "cutting rate," which by competition he was forced into giving in order to obtain the work. When he comes to turn the house over to the owner, if the latter has not had experience in building, he is quite likely to accept it as a good job, or if he detects the "little game" of the contractor, a law suit generally ensues. We do not mean to say that carpenters, or builders, do not sometimes willfully violate their contracts and cheat and deceive, when they are not induced to do so by competition. Unfortunately they often do.

Frequently poor work is put into buildings because the owners are too careless or too ignorant to furnish the proper plans and specifications, and make them a part of the contract. Thus, the contract may name certain kinds of work, but omits to mention the quality of the lumber, or the paint, or the styles and kinds of hardware to be employed, As might be expected, the builder, insted of putting in lumber that should cost $40 a thousand, contents himself in using that which costs but $30, and so through the work, wherever anything is left to his judgment or discretion, it is likely that he will figure for his own interest.

What is the remedy? A very simple and sensible way to build a house is for the party so building, to just find out what kind of a house he wants. Then ascertain how he desires it finished in detail. If he is able, he would do well to employ a competent architect to draw his plans and furnish him with the specifications. Then ascertain as nearly as possible by inquiry and observation, what good labor is worth, after which, take his plans and specification to a reliable builder and let him make his bid, giving him to understand that good work would be required. In almost every instance, it will be safe to assert, reasonable figures will be made. We mean reasonable figures for good work, but not as close as figures would be envolved by a process of competitive bidding. Good work cannot be had for nothing, and a good house cannot be built without good work. The dearest of all kinds of labor is that slipshod kind of carpenter work, the evidences of which are left in so many of our houses. But a good, solid, substantial, well-made building can be erected at reasonable figures, and by men of limited experience in building, provided they employ honest builders and give them a chance to obtain a fair renumeration for their labor and time, without compelling them to resort to the tricks of the trade to get it.—*Industrial World.*

ON Sunday morning, April 17th, between one and two o'clock, a fire broke out in Hall & Brown's lumber yard at Berlin, and before it was subdued some $300,000 worth of lumber was consumed. There was no insurance and the cause is unknown.

COST PRICES.

We have often urged upon our manufacturers and merchants the need of a close analysis of expenses, when making up the cost of their goods. And not long since, in an article upon Agricultural Machinery, we urged greater caution in fixing selling prices, which are not always sure of returning the ratio profit which makers imagine. We find in the *Book-Keeper* a very interesting paper upon the subject of cost prices, by Mr. James Howard, of Bedford, England, president of the Agricultural Engineer's Association, and consider it well worth the careful attention of every Canadian manufacturer:—

"If a history were written of the rise and progress of our most successful mercantile establishments," says Mr. Howard, "it would doubtless be recorded, as a prominent feature in each case that a careful system of account-keeping had been adopted. Indeed, it may be said that without efficient book-keeping the success of any commercial enterprise is insecure, and instances are not wanting where apparently thriving concerns have been made shipwreck by violating the first prineiple of commercial economy. In a manufacturing business, by far *the most important point* in account-keeping is that of ascertaining the exact cost of articles when ready for delivery to the customer. To arrive at this may at first sight appear a very easy matter, but in order to obtain even approximate accuracy several conditions must be fulfilled. In the first place, every useful system of cost prices is dependent upon the correctness of the general accounts of the concern—an obvious fact when it is remembered that the measure of business success is simply the difference between the totals—payments for materials, wages, and establishment charges, and the net amount received in payment of sales.

Referring for a moment to the question of selling prices, is it not unusual to see agricultural machines offered at prices which evidently have been fixed at random. In some such cases the practiced eye can see at a glance that after the usual trade allowances have been deducted from the nominal selling prices, very little profit, if any, is left for the maker. Again, if the lists of the different manufacturers be taken for certain articles, it is singular to notice now nearly the figures agree. This seems to show that the practice of fixing prices by the list of others is not uncommon, those of the foremost houses being generally taken as the standard. Firms which adopt this practice would appear to say to themselves. 'It pays so-and-so to sell at such-and-such a price, and so it will us.' It may be true that the price of one firm must conform to some exient to the price of other firms; but it is none the less true that there is insecurity in simply following the lead of others without investigation. I have known even first-class houses which have not troubled themselves to go into the cost of certain articles which they manufacture. Again, it does not always follow that because a given article can be produced at a certain establishment and sold at a given price with a profit, at another establishment the same thing can be done; the mode of manufacture, the extent of the demand, the facilities and cost of transit, and the general policy adopted in the conduct of the business may vary so much as to make the result in one instance a fair profit, and in another an actual loss.

"A popular impression prevails that small makers can afford to sell goods at lower prices than large manufacturers, the idea being that the expense of the former are proportionately less. Apart from the fact that the expenses of the small maker are, as a rule, relatively higher han his larger rival, there are other considerations."

Any plan of arriving at prime costs, says the writer quoted, to be of reliable value must of necessity take note of every element of expense, both in production and sale. To arrive at these elements, it is *absolutely necessary* that the general cash-book should contain a detailed account of all payments, and that every item should be posted under the heading to which it belongs. For instance, payments in respect of any one of the following matters should be carried to separate accounts:—

Materials, Wages, Foremen's salaries, Clerks' salaries, Travelling and Public Exhibitions, Expenses of Forwarding Department, Rent, Rates, & Taxes, Plant, Repairs of Factory, Patents, & Royalties, Horses & Vehicles, Fuel & Gas, Advertising, Legal Expenses, Printing, Stationery, Stamps & Postage.

Furthermore, accounts should be kept of the lors upon returned goods or exchanges, cost of experiments, banking expenses, bad debts. "From an analysis of these items of expenditure—say for three years—a tolerably safe guide as to the percentage upon the returns of the business is obtained." These several items may be grouped under three heads; the first includes the purchase of raw materials and all articles used in the manufactory; the second deals with the articles produced and the cost prices of the same; and the last relates to the costs and charges incidential to the sale of the goods manufactured.

"The establishment-charges in the case of my own firm are calculated upon the average cost per cent. on the returns of three years, and the charge of the carriage of goods is estimated at the average cost per ton of sending to the several points of delivery. In respect of the cost of melting pig iron and delivering the same to the moulders for casting, the practice of my firm is periodically to adopt a test—say for a fortnight; the whole of the materials and the produce of clean castings, runners, wasters, etc., being weighed. The labor for moulding is charged in the cost price in the same way as for other departments. The same experiments are also utilized to show the total cost per ton of the finished castings produced in the period.

"The foregoing remarks on cost prices would be very incomplete if I were not to touch upon a point in connection with the subject which does not always receive the attention due to its importance. I refer to the question of stock, viz., raw matertials, stores and manufactured articles. It cannot be too prominently kept in mind that to its original cost five or ten per cent. is added to stock by keeping it the year round. Hence, it may be taken for granted that profuse buying of materials and over-production of manufactured articles are prolific sources of loss and waste; but, on the other hand, a sufficient stock for the requirements of current business is absolutely necessary, in order to prevent delay in the execution of orders and to make a business run smoothly. In the endeavor to overcome the difficulties of this question and strike the happy mean, it has long been the practice of my firm to keep accurate accounts of the stock in hand of finished implements and all parts thereof, which are corrected to the first of each month. From the data thus obtained the stock is equalized and a sufeguard provided against the evils referred to."

There are many points in this address which Canadian manufacturers may ponder with advantage. It will be seen from the exhaustive survey which Mr. Howard makes, that the discovery of the cost of an article made, involves a great number and variety of considerations. And as no manufacturer in this country any more than in the old land, can ignore the many sources of leakage and loss, and yet arrive at an accurate estimate of prime cost. Too many among us, we fear, are governed in fixing their selling price by what their neighbor charges, instead of laboriously calculating the cost, each for himself.—*Monetary Times.*

Room for the "Lumberman."

The Canada Lumberman is the name of an excellent sixteen page paper, devoted to the in terests of the lumber and timber industries of the Dominion. It is full of valuable information and interesting reading for those interested in lumbering operations, as well as others. We believe there is room for such a paper in Canada, and it should receive the support of every person interested in the trade. It is printed by Toker & Co., publishers of the Peterborough Review. The subscription price is two dollars a year, which is very cheap.—*Sherbrooke Gazette.*

Hagyard's Pectoral Balsam is composed of the most healing balsams and gums. The balsams, which enter into its composition, were used by the natives when America was first discovered, and are combined with other vegetable tonics, so blended together, that it is a specific for all affections of the throat and lungs. Thousands of bottles are used annually, and is considered one of the standard preparations of the day.

THE ART OF WOOD WEAVING.

The manufacturing district of the Austrian empire lies in the north of Bohemia, where miniature Birminghams and Manchesters are congregated together by the dozen, and hundreds of thousands of "hands" are actively and ceaselessly employed. For miles the high road is bounded by houses, chiefly one-storied wooden buildings with roofs of tatch or shingle, where the rattle of looms may be heard without intermission from early dawn till late at night. In some of the towns numberless chimneys pour forth volumes of black smoke by day, while by night the windows of the large factories glow with light as if there were a general illumination. One of the busiest of these little towns and villages is Ehrenberg, which lies close to the Saxon frontier, and is distinguished from the rest by a peculiar industry, which appears to be carried on in only two other places besides. The peculiar industry for which Old Ehrenburg is distinguished is wood weaving, *sparterie* work, as it is called, which was introduced something more than a century ago by a carpenter named Anton Menzel. The threads used for weaving are no thicker than writing paper, and vary in width from the fifth to the twenty-fifth part of an inch. The aspen is the only tree whose wood is sufficiently tough and pliable to supply these threads in the required lengths. The aspen was formerly indiginrus in Bohemia, but has now almost entirely disappeared, or at all events does not exist in sufficient quantities to supply the demand in any degree. Consequently the raw material for the *sparterie* work has to be brought from Russian Poland, which is both a laborious and expensive process. The wood merchants go to Poland twice every year, in the early spring and in the autumn, the only times at which the wood can be cut with advantage, as none can be used at once but that in which the sap has not yet risen, or from which it has departed. Wood cut during the summer has to lie in water for a year, otherwise it is red and useless. It must be quite free from knots, as the smallest defect or irregularity, such as as ordinary persons would hardly notice, makes the fibres quite unfit for weaving purposes. Arrived in Ehrenberg, the wood is planed and divided into pieces nearly 2½ inches wide. When they have been made perfectly smooth they are divided again by an instrument resembling a plane, but furnished with a number of fine knifeblades, which mark the wood at regular distances according as the strips are to be 1-25 or 1-5 of an inch in width. This process requires the utmost dexterity and nicety, as it is absolutely essential that the divider should exactly follow the diretion of the fibre; and for this reason among others it must always be done by hand. The divider makes incisions 1-5 of an inch deep; the wood is then carefully planed, and comes off in this paper like stripes, some of which are not wider than a stout thread. They are gathered up as they fall by women, who examine them and pick out any defective pieces; and, in spite of all care taken in the selection and manipulation of the wood, there i a good deal of waste in the process. The threads or fibres, being now ready, must be tied in couples at one end before they can be woven. This is done by children, and in Ehrenberg little creatures of four years old and upwards are employed at it, and earn fourpence a day. The weaving is done chiefly by women, and in looms which differ considerably from those in ordinary use, the fibre being, as before mentioned, not more than from 39 to 50 inches in length. The longer fibres form the warp, the shorter (28 to 32 inches) the woof, which is passed in and out by means of a little instrument with an eye like a needle. Until within the last few years this concluded the whole process—the "foundations," as they are called, were complete, and nothing more was done, except that a few hats and caps were made of them; but these were of the very simplest description, and anything but becoming. Moreover, they were glued together, which made them very unpleasant to wear in hot or wet weather, and accordingly they fetched but fifteen pence or 2s. and 4d. per dozen, and were worn only by the very lowest classes. Within the last few yesrs, however, a great change for the better has taken place, thanks probably in part to the interest shown by the Government in the manufacture, in part to the establishment of an enterprising firm, and in part perhaps to the fact that the Ehrenbergers have at last become alive to their own interests. At present Ehrenberg sends out not only the raw material but ready made goods—fashionable hats of kinds, and a variety of fancy articles skilfu concocted out of the wood fabric: ladies' hats of every possible description and the latest fashion such as no one need be ashamed to wear made entirely of wood, and sold at astonishing low prices. Men's hats are to be had of all shapes, from the Panama hat—not a whit inferior to that bought in Paris—to the common hats exported in large quantities in China, and the linings or foundations which give stiffness to the fez of the Turkish soldier. The export trade embraces all Europe, from Spain to Russia, extends beyond the Caucasus to India and China, and maintains active relations with North and South America, as well as Australia. The manufacturers are in direct communication with the four quarters of the world, and their goods are being introduced into Africa by French and English traders.—*Cassell's Family Magazine.*

THE PETCHORA TIMBER-TRADING COMPANY.

From Mr. H. Seebohm's work on "Siberia in Europe," we gather that Alexievka is the shipping port of the above company. It is a group of houses built upon an island in the delta of the great river which empties itself into the Arctic Ocean, nearly opposite Nova Zembla, and where the ships are laden with larch for Cronstadt. The larch is felled in the forests 500 or 600 miles up the river, and roughly squared into logs varying from 2 to 3 ft. in diameter. It is floated down in enormous rafts, the logs being bound together with willows and hazel boughs. These rafts are manned by a large crew, some of whom help to steer them down the current with oars and poles, and others sre hired for the season to assist in loading the ships at Alexievka. Many of the men bring their wives with them to cook for the party. Sleeping huts are erected on the rafts, and it becomes to all intents and purposes a little floating village, which is frequently three months in making the voyage down the river. Marriages have been known to take place on these rafts. Occasionally a funeral has to be performed, and sometimes all hands are engaged in helping to keep the raft from running ashore or grounding on a sandbank. Sometimes in stormy weather it is necessary to moor the raft under the lee of an island, or a promontory, to avoid the danger of having it broken up by the violence of the waves. With the greatest care in the world, this will sometimes happen. The Russian has a good deal of the fatal facility to blunder which characterizes the Englishman, and shiploads of stranded logs of larch are strewed on the islands of the delta, and on the shores of the lagoon of this great river.

Woods for Heating.

The *Globe* has the following:—In Toronto, as elsewhere, the consumers of wood for fuel esteem the hard maple as the most valuable for the purpose. This is an erroneous notion. All the oaks yield, more heat than maple does, and so, among the other woods accessible, does yellow birch. Here is a table based of American experiments made several years ago, and showing the value of different kinds of wood for firing. Shell-bark hickory is taken as the standard:—

Shell-bark hickory	100	Hard Maple	59
Pignut hickory	95	White elm	58
White oak	84	Red cedar	56
White ash	77	Wild cherry	54
Dogwood	75	Yellow pine	54
Scrub oak	73	Butternut	51
Red oak	69	White birch	43
Birch	62	White pine	40
Yellow oak	60		

Carefully Guarded.

The Canada Lumberman.—Toker & Co., of Peterborough, have purchased the Lumberman, and it will hereafter be published semi-monthly by them. In the introductory we are told that The Canada Lumberman will be purely a trade organ and will be absolutely non-political. If the number before us is a fair specimen of what it will be in the future, we have no hesitation in saying that the interests of the lumbermen of Canada will be carefully guarded by it.—*Lindsay Warder.*

Travelling Agent.

MR. A. L. W. BEGG has been appointed agent for the CANADA LUMBERMAN, and is authorized to collect subscriptions and grant receipts therefor and to make contracts for advertisements appearing in its columns.

The Canada Lumberman

DEVOTED TO THE LUMBER AND TIMBER INTERESTS OF THE DOMINION.

PUBLISHED SEMI-MONTHLY BY

TOKER & Co. PETERBOROUGH.

Terms of Subscription:

One copy, one year, in advance	$2 00
One copy, six months, in advance	1 00

Advertising Rates:

Per line, for one year	$0 90
Per line, for six months	50
Per line, for three months	30
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Special rates will be made for page, half page and column advertisements.

Advertisements intended for insertion in any particular issue should reach the office of publication at least three clear days before the day of publication, to insure insertion.

All communications, orders and remittances should be addressed and made payable to TOKER & Co., Peterborough, Ont.

Communications intended for insertion in the CANADA LUMBERMAN, must be accompanied by the name of the writer, not necessarily for publication, but as a guarantee of good faith. Communications to insure insertion (if accepted) in the following number, should be in the hands of the publishers a week before the date of the next issue.

PETERBOROUGH, Ont. MAY 2, 1881.

THE Quebec *Chronicle* learns that owing to a lack of water in the various small streams of the lumbering districts, several hundred thousand logs in the Province of Quebec are likely to remain in the woods owing to the impossibility of driving them.

MAPLE flooring is meeting with a steadily increasing demand in the Chicago market. Does this not suggest that Canadians might, with advantage, turn some of their attention to this wood, of which there are large supplies in many districts.

THE Three Rivers *Concorde* asserts that in Quebec pine saw logs, 12 to 15 inches in diameter, which formerly paid dues at the rate of 10 cents, now pay 12 cents; that those of 17 inches and over now pay 25 cents as against 15 cents formerly; and spruce logs which were rated at 5 cents now pay 6 cents. This is certainly a very substantial increase.

AN accident occurred at Ottawa on the 15th of April, which, had it not been for the timely arrival of medical aid, would have resulted in the death of Mr. Peter McLaren, a wealthy lumberman of Perth, Ont. Mr. McLaren had been confined to his room at the Russel House through illness. That morning his medical adviser ordered a new prescription, to be used internally. At the same time he was using an external application of belladonna and iodine. Through some accident Mr. McLaren took a heavy dose of the latter, but fortunately discovered his mistake in time to save his life.

AN Ottawa dispatch informs us that the drive prospects at present are uncertain. On the main streams no trouble will be found in getting down the logs, and from all accounts there is plenty of water in Indian river and its tributaries. On the north side of the Ottawa Valley there is no cause to fear but that all will go well, and any trouble that may arise will be on the south side, and along the creeks that flow from that direction. If, however, the run, which may be naturally looked for at this season comes, the only trouble which the lumbermen fears this season will be taken off his mind.

MR. J. J. DONOUGH, of Surrency, Georgia, furnishes us the following report of the cut of one of the American Saw Company's 56-inch Trenton Tooth Saws:—

14	Pieces	pitch pine,	3×9	883 feet
176	"	"	12×12	71,880 "
71	"	"	9×12	13,068 "
87	"	"	2-inch plank	3,820 "
37	"	"	1½ "	1,122 "
			Merchantable	90,773 feet
			Boards	20,000 "
				110,773 feet

Worked eleven hours. Sawed 230 logs.

While Messrs. Bentley, Meyer & Southwick, of Rochester, N.Y., say that they have sawed about 1,000,000 feet of the hardest white swamp oak and any quantity of pine with their inserted tooth saw, and that it did its work equal to the best gang sawing.

THE *Timber Trades Journal* of the 6th April, under the head of Liverpool, says:—"Another week has passed without bringing forth any signs of a return to a more active condition of business than has prevailed for some time past. The winter has at last departed sufficiently to admit of building operations proceeding, but this has not yet affected our trade in any noticeable degree, for orders come in slowly, and when they do come are competed for eagerly on all sides. All rumors from Canada that have reached this side point to a maintenance of the prices that were paid early in the present year, but we cannot find many buyers in this district willing to operate at the rates demanded by shippers. The outlook for the coming season is far from bright, for the present state of trade in the country is not brisk, and there is now on hand a stock equal to the probable demand for the next five or six months. In the face of this, it is most difficult to understand why such high prices should be demanded abroad, and still more difficult to comprehend why they should be paid, seeing that, so far as this port is concerned, the tendency of the market has been downward, not only for one or two articles, but for nearly every class of wood goods imported.

FOREST CONSERVANCY.

The English *Journal of Forestry* has called attention, as we learn from an extract which will be found elsewhere in this issue, to the marked advance in forest conservancy in the colony of South Australia. It seems that the government has instituted a system of forest reserves, and that an important addition was made last year to the area thus reserved by the Forest Board. By natural regeneration and by the formation of new plantations they are thus wisely and with prudent foresight, providing against the extirpation of their forests and the arrival of a period when they must depend upon importations from abroad for their supply of timber.

South Australia is a comparatively new colony. Men who are not of advanced age can remember its formation and settlement. New Zealand, which is also one of the younger dependencies of the British empire, has very sensibly under wise administrators adopted a similar system. Is it creditable to Canada, being as it is one of the oldest settlements and the most important in wealth and population of the colonial members of the British empire, to lag behind these minor and younger communities, and show less common prudence or foresight on such a vital point? It may be said that we were so richly endowed with forests that it did not seem seem necessary to take such precautions. Even if such an excuse were valid as regards the past, it is utterly without weight now. At present it is generally conceded that our forests are far from inexhaustible, that indeed the period of their duration, at the present rate of consumption, is limited to a generation at the furthest, so we would do well without delay to follow the example thus offered to us.

MR. HENRY ATKINSON, of Etchemin, opposite Quebec, has been successful in forming an English joint stock company, which takes over the lumber business formerly conducted by the firm of H. Atkinson & Co., including all their mill property and limits, as well as the limits belonging to the Bank Nationale.

FOREST LANDS.

We were glad to receive from Mr. Jack, a New Brunswick lumberman, the letter which we publish in another column, endorsing what we have urged as to the necessity of discriminating between the lands which are fit for settlement, and those which should be preserved as forests. It greatly strengthens our argument to find that not only in Ontario and Quebec, but also in New Brunswick, and we may fairly presume in other provinces of the Dominion of Canada, people are waking to a sense of the importance of this subject of forest preservation, and to the folly of opening indiscriminably for settlement districts which are not adapted for agriculture, and where the settler, without doing any good for himself, brings additional risk of the speedy destruction of our fast diminishing sylvan wealth.

The present wasteful and unphilosophical system of administration of our forests, will never, we are convinced, be remedied till there is a separate department for the supervision of woods and forests. We find many who individually will assent to this, and we call upon them to unite their efforts, which though separately impotent would collectively be most powerful, and to urge the adoption of a more sensible and prudent management of this very important portion of the capital of the country.

THE LOG CROP.

The *Northwestern Lumberman* of the 16th April contains an article on "The Log Crop' and one on "Last Year's Work of the Mills," from which we gather the following figures bearing upon the present position and future prospects of lumber for the current season.

With regard to the log crop, the *Lumberman* claims that the following figures are nearer correct than "any statement that has ever been made up" for the districts to which it refers. The item of "new logs" includes the estimated amount banked to April 15th, and that of "old logs" those left over from other years, either in mill booms, store booms, or in the streams:—

District.	*New Logs.*	*Old Logs.*	*Total.*
Miss. Valley	1,673,000,000	568,500,000	2,241,500,000
Lake Superior	147,500,000	5,000,000	152,500,000
Lake Michigan	1,664,000,000	287,500,000	1,951,500,000
E. Michigan	1,582,200,000	217,250,000	1,799,450,000
Wolf River	115,000,000	20,000,000	135,000,000
Total	5,181,700,000	1,098,250,000	6,279,950,000

The foregoing figures do not, of course, include the logs that will be put into streams and taken out by the railroad mills during the summer. Under average circumstances these are estimated to foot up 150,000,000 feet, while another 1,000,000,0000 feet may be added for stocks to be supplied by mills not included in the above estimate, bringing the total log stock of the Northwestern States up to 7,455,000,000 feet for the season. Of last year's stock however, about 1,250,000,000 feet must have been carried over, and it is not unreasonable to assume that, for various reasons, at least as much will remain uncut at the close of the present season, leaving about 6,250,000,000 feet as the probable production of the saw mills in the north-west for the present year.

Turning now to the *Lumberman's* elaborate statistics with regard to the lumber product of the same territory for the last eight years, we find it was in:—

Year.	*Lumber.*	*Shingles.*
1873	3,993,780,000	2,277,433,550
1874	3,751,396,000	2,473,216,555
1875	3,968,553,000	2,515,838,240
1876	3,879,046,000	2,900,530,725
1877	3,595,333,496	2,693,856,755
1878	3,629,472,759	2,561,490,750
1879	4,806,943,000	2,859,112,750
1880	5,651,295,006	2,972,912,160

These figures show a large increase in the supply during the last two years, but that it has not been more than the demands of consumers required is proved by the fact that the stock on hand on the 1st January of the four years named stood as follows:—

Year.	*Lumber.*
1878	2,018,384,901
1879	2,121,323,513
1880	2,313,823,437
1881	2,836,954,969

Doubtless if these figures were brought down to the present it would be found that owing to the lateness of the season the available stock is quite as low now as it was this time last year.

NEW BRUNSWICK TIMBER LANDS.

FREDERICTON, N.B., April 15, 1881.

GENTLEMEN,—I enclose you the statistics which you have asked me for.

Allow me to congratulate you on the very valuable character of the information given to the public by THE CANADA LUMBERMAN.

Your remarks on fires resulting from settlers locating on lands unfit for settlement are very applicable to New Brunswick. It is time that our mill-owners should receive a little of that attention which has been so lavishly and often unwisely spent upon the settler, and that the public should learn to discriminate between lands which ought and those which ought not to be settled, in which matter great ignorance prevails.

Yours truly,

EDWARD JACK.

Messrs. Toker & Co., Peterborough.

NEW BRUNSWICK.

The following are the receipts from Woods and Forests and Crown Lands since Confederation:—

Year.	*Woods and Forests.*	*Crown Lands.*
1867	$ 24,467 50	$ 12,832 29
1868	20,565 00	15,632 84
1869	18,464 80	16,959 87
1870	21,043 85	12,995 51
1871	27,945 07	26,645 34
1872	45,776 11	29,577 51
1873	41,178 25	17,447 26
1774	25,118 52	9,745 84
1875	52,802 65	6,938 13
1876	66,014 82	9,139 66
1877	94,569 08	6,288 98
1878	105,922 16	3,617 45
1879	60,683 01	3,846 93
1880	125,630 39	17,782 15
Total	$739,181 21	$189,449 76

ST. JOHN, N.B.

EARLY NAVIGATION.—Navigation has opened earlier than was expected at the time of our last writing. The ice is out of the river so as to enable the steamers to commence running on the 11th inst., which is the earliest for many years past, the usual time being from 20th April to 1st of May.

LOW WATER.—The weather continues very cold and dry, and in consequence, the water is unusually low in the river for the season, and the anxiety as regards the prospects for stream driving are not diminished.

LOGS MOVING.—A few rafts of logs of last year's production, and frozen in last fall, are now coming forward, and some of the mills are commencing to saw, but it will be some weeks yet before logs in any quantity will be available.

WEATHER.—In this section during the past winter, and the spring thus far, the weather has been in marked contrast with that of very many places both on this continent and in Europe. We have had no violent storms, no severe frosts, no heavy thaws, no floods—but a steady course of fine weather of medium temperature, varied with light falls of snow. During the month of March we had but one snow storm, and that on the last day of the month, when a few inches fell, which all disappeared in two days after.

SHIPMENTS.—Shipments of deals and other sawn lumber for fortnight ending this date, say:

For Europe	5,962,000 Sup. ft.
" United States	1,486,000 "
" West Indies	263,000 "

FREIGHT RATES.—Freights are without material change; we quote, Liverpool and London 57/6: Bristol Channel 60/; Dublin 58/9; Boston $2.25; New York and Philadelphia $3.

St. John, N.B., April 21st, 1881.

New York Exports.

The *Real Estate Record* gives the following as the exports of lumber from the port of New York:—

	This Week, feet.	*Since Jan. 1, feet.*
West Indies	979,000	13,[illegible],284
South America	536,723	7,191,154
East Indies, Africa, etc	112,952	1,719,400
Europe, Continent	.....	[illegible],150
Europe, United Kingdom	98,500	1,460,375
Total	1,727,175	24,460,363

THE Hamilton & Northwestern Railway is doing a lively business in timber this spring. Timber trains arrive in Hamilton every day and it is being shipped by vessel as fast as possible.

EMERY WHEELS FOR SAW GUMMING!

Solid Emery Wheels are now almost in universal use for the purpose of gulletting and gumming saws. Statistics show from 25,000 to 30,000 saw-mills in the United States. Many of these run only a single saw each. A one-saw mill would use one or two wheels a year, costing $3 to $4 each, and when such small mills order single Emery Wheels from the factory, the express charges often equal the cost of the wheel. There was a time when the quality of Emery Wheels was so uncertain, and the demand so fickle, that storekeepers could not afford to carry them in stock. Now, however, Saw Gumming Wheels have become as staple an article as Files, and every dealer in saws, Hardware and Mill Supplies can afford to carry a few dozen standard sizes in stock. Large dealers order stocks of $500 to $750 worth at a time. Saw Gumming Wheels are used with the edge (or face) square, round, or beveled. Probably seven-eigths of all in use are beveled.

Tne principal sizes are:

$8x\frac{1}{4}$, $8x\frac{3}{8}$, $8x\frac{1}{2}$ — $\frac{3}{4}$ in. hole.

$10x\frac{1}{4}$, $10x\frac{3}{8}$, $10x\frac{1}{2}$, $10x\frac{5}{8}$ — $\frac{3}{4}$ in. hole.

$12x\frac{1}{4}$, $12x\frac{3}{8}$, $12x\frac{1}{2}$, $12x\frac{5}{8}$, $12x\frac{3}{4}$, $12x\frac{7}{8}$ — $\frac{3}{4}$, $\frac{7}{8}$ and 1 inch. Holes,

Probably more wheels $12x\frac{3}{8}$, $12x\frac{1}{2}$ and $12x\frac{3}{4}$ are used than all the other sizes together. Saw Gumming Wheels are used, however, of all sizes up to $24x1\frac{1}{2}$. The most frequent complaint is that Emery Wheels harden the saw so that a file won't touch it. The answer is that you don't want a file to touch it. An expert workman will shape and sharpen the teeth with an Emery Wheel, leaving the teeth *case hardened*, in which condition the saw will cut about $33\frac{1}{3}$ per cent. more lumber than a soft saw will. Those who want to use the file, however, have only to touch the saw *lightly* a second time (after going all over it once), and this second touch will cut through the case-hardened scale.

A QUESTION OF QUALITY.

Thirteen years of experience as makers of, dealers in, and actual users of Emery Wheels, have led us to a decided opinion as to what quality is the best. We prefer for almost every use an "Extra Soft" wheel like the "Pocono." We believe that money lost through the rapid wear of the wheel is more than made up by the money saved on wages. As we cannot get every one to adopt our views, we make several qualities, so as to meet their views. We say to those who think they can only be satisfied with some other make of wheels (not Tanite), that we can furnish qualities *to match* any and every other make. If you have got used to some special quality of wheel, let us know what it is, and we can send you *a Tanite Wheel of similar quality*. Our *regular* classification of Saw Gumming Wheels is as follows:

CLASS 2. MEDIUM—HARD.—This Wheel is THE STANDARD Saw Gumming Wheel all over the world. Probably seven-eighths of all the Saw Gumming Wheels used are "Class 2." It cuts fast and keeps its shape well. Some think it too hard, some too soft. We prefer the "Pocono."

CLASS 3. MEDIUM—SOFT.—The same as to coarseness and fineness as "Class 2," but a *softer*, and therefor freer cutting wheel.

CLASS "POCONO." EXTRA SOFT.—This Wheel we prefer to all others. It is both *finer* in grain and softer than either of the above. As a Saw Gumming Wheel, Class "Pocono" is specially suited to those practical and experienced Sawyers who know how to grind with a light touch, and who want a free cutting wheel that will not create much heat.

Illustrated Circulars and Catalogue, showing Cuts of Saw Gumming Machines, and Shapes, Sizes and Prices of Wheels, sent free on application.

L13

The Tanite Co. Stroudsburg, Monroe Co. Pennsylvania

CANADIAN TRADE SPECIALLY SOLICITED.

M. Covel's Latest Improved Automatic Saw Sharpener!

Is the Most Perfect Machine that has ever been Introduced into Mills for that purpose.

CIRCULAR SAW STEAM FEED!

I would also call special attention to my

Heavy Circular Saw Mills

and for STEAM MILLS, would recommend the Steam Feed, having put in several which are giving the best of satisfaction, as will be seen by the following testimonials:—

GRAVENHURST, August 20th, 1880.

WM. HAMILTON, ESQ., Peterborough.

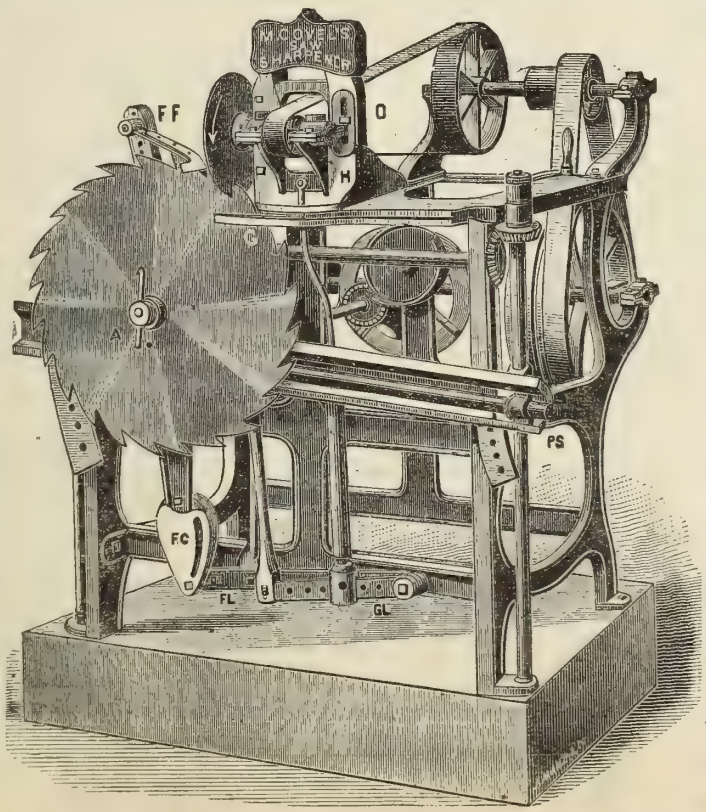
DEAR SIR—I have used your Steam Feed for near four months, and it has given me perfect satisfaction in every way; it is admitted by every person who has seen it work to be the best feed ever invented. Since I put it into my mill, I have not lost ten minutes time fixing anything belonging to it. I can cut 18 boards 13 ft. long in one minute. It can do much smoother and better work than the pinion feed. It is easily governed and reverses the carriages instantly. I am thoroughly satisfied with it and can recommend it to any person who has a Circular Saw Mill for cutting long or short logs. I consider I have cut more lumber than will pay for the Steam Feed since I got it than I would have cut had I not put it in.

Yours respectfully,
WILLIAM TAIT,
Lumberman, Gravenhurst.

TORONTO, August 11th, 1880.

WM. HAMILTON, Peterborough, Ont.

DEAR SIR—The Steam Feed you put in is working splendidly. Yours, &c.,
THOMPSON, SMITH & SON.

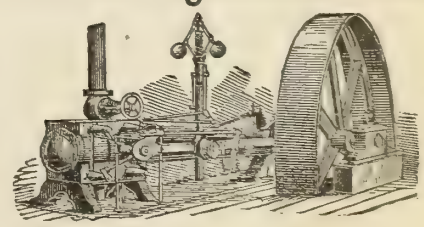


MILL MACHINERY!

I am also manufacturing Saw Mill Machinery, for all sizes of Gang or Circular Mills, Span or Double Circulars for Slabbing Small Logs. My Patent Jack Chain for drawing logs into Saw Mills, acknowledged by all to be the Cheapest and best ever got up; also, my Patent Lumber Markers, different sizes of Edgers, Gang Lath Mills, Trimmers, Power Gummers, and all Machinery used in a first class Gang or Circular Saw Mill; also, small Hand Gummers for use in the woods, for Cross-cut Saws. Rotary Pumps of different sizes, for Fire Protection in Mills, &c.

Horizontal Engines and Boilers

CORLISS ENGINES



Where economy of fuel is the great consideration, along with uniformity of speed, such as is required in Grist and Flouring Mills, Woollen and Cotton Factories, or large Factories of any kind, I supply the Corliss Engine. I feel justified in saying that our Style, Workmanship and Finish on this Engine will be no discredit to its renown, and certainly is not equalled in this country for economy of fuel. I have them working at $2\frac{1}{2}$ pounds of coal per horse-power per hour.

L10

WILLIAM HAMILTON - - PETERBOROUGH, ONT.

Chips.

THE mill belonging to the Ontario Bank at Parry Sound is being put in order and is expected to commence running about the 1st of May.

IN the manufacture of shoe lasts it is estimated that 500,000 cords of birch, beech and maple timber is used, and an equal quantity for small tools.

MR. ALEX. MCARTHUR, of Kinmount, is shipping birch lumber to the front. So is Mr. Geo. Cluxton. All the factories along the Grand Trunk are glad to get it.

THE lumber exports from St. John, N.B., for the past three months to trans-Atlantic ports reached 11,121,679 feet, not including 499 tons of birch timber.

A PINE TREE was recently cut in Clearfield county, Mich., that made three sticks of square timber, 62, 60 and 36 feet long respectively. At 36 feet from the stump the tree squared 27 inches.

THE large belt referred to in our last issue as having been made by Messrs. Robin & Sadler at their factory in Hamilton, should have been credited to Montreal as it is in the lattter city these gentlemen are located.

THE official statement of the banks of the Dominion for the month of March show an increase of $400,000 in circulation ; an increase in Dominion deposits both on demand and on time and an increase in assets of $1,000,000.

THE Omemee *Herald* says Mr. John Kincaid, of that place, manufactures a cedar shingle the surface of which is as smooth as if it had been planed or sand papered, and that the point and butt are cut perfectly true and square.

J. H. REIFFENSTEIN, D.L.S., who has just returned to Winnipeg from the Shell River district, where he has completed a subdivision survey of six townships, says it is principally a timber tract of country, consisting of poplar, balm of gilead, and spruce, a belt of the latter having been struck in the eastern part of the survey. Poplar trees averaged thirteen inches in diameter.

DURING the winter several improvements have been made in the Parry Sound Lumber Company's saw mill at that place, with a view to economising labor and increasing the capacity of the mill. A new iron burner has been erected, and upon trial, although the sawdust and wood thrown into it was mixed with large quantities of ice, it proved a complete success. The company expect to cut from fourteen to sixteen million feet during the season.

AN English paper predicts that wooden railway sleepers are to be replaced by steel, just as iron rails are being superceded by steel rails. Steel sleepers, it says, are very flexible, and will outlast the toughest rails, while their greater cost over timber sleepers will be compensated by their greater endurance, and the diminished expenditure of relaying. They are now manufactured in great quantities at Dusseldorf, and 70,000 tons have been laid down as an experiment in various parts of the continent.

A MANITOBA exchange suggests that it would be an interesting experiment if the farmers in Manitoba would enclose a few acres of prairie with a strong fence, carefully excluding cattle and other animals. The result would likely be a vigorous growth of young trees, perhaps mostly poplar. On a piece of ground which, for at least two years, was protected from cattle and fires, immense numbers of young poplars made their appearance last season. Claims for tree culture might, perhaps, in this way be retained. In any case a fine grove of trees at every farm house could be secured with very little trouble.

AT the installation of the officers of the Buffalo Board of Trade on the 15th April, the newly elected president said :—"There is no doubt but that our citizens with very few exceptions are in favor of a new reciprocity treaty, and are therefore desirous that a joint committee should be appointed on the part of Great Britain and our Government to take the matter into consideration, and devise a plan that would result in giving the people of Canada and this country a just and equitable treaty, one that would be so fair that the good resulting from it would be mutually advantageous to the people of both countries.

YELLOW PINE TIMBER.

The very best of yellow pine timber is not that of greatest density. Pitch pine is not as good for decks or deck frames as other fine-grained pine from the South. Before the war of 1861 there was a species of yellow pine grown about Wilmington, N.C., whose specific gravity equalled the best pine on our coast, the mean of which was ·637 = 39 lbs. 13 oz. when squared ; when round and in bark, ·781 = 48 lbs. 13 oz. The very best yellow pine timber is that in which the even fineness and firmness of the grain is continued to the centre or pith of the tree, ranging from 15 to 25 grains to the inch. By careful observation much information that is valuable may be obtained from the table of specific gravity. Notwithstanding the thickness of the bark of the yellow pine and its lightness (the specific gravity differing not materially from that of cork), we find that the pine timber in bark weighs much more than the square timber. This, to the casual observer, would hardly seem possible ; the man unacquainted with the nature of yellow pine sapwood would be likely to doubt the correctness of the table. But such is the nature of the exterior coating immediately under the bark of yellow pine, that we cannot find a substance more analogous than sponge; its retentive properties are very similar, and the turpentine with which this sapwood is saturated is the cause of its increased specific gravity above that of the squared timber when covered with bark.

The thinner the sap wood, the less the specific gravity.

There is an error in the prevailing opinion in relation to the durability of yellow pine timber. Our Government has become a heavy stockholder in this prevailing error, by acting on the supposition that yellow pine timber requires a great amount of seasoning. The consequence has been that large timber houses have been erected and filled with this timber, and kept for many years, and when in a state of decay it has been used for new vessels and vessels undergoing repairs. This is a very great mistake ; an equal number of months would have answered a better purpose than as many years, as regards the shrinkage and durability of yellow pine. When in pieces of any considerable size, it shrinks but little after the vessel is in active service ; when used as deck plank, they should be made narrow. Our judgment, based upon a large experience, leads us to the conclusion that yellow pine requires no seasoning to make it durable. The ebb and flow of the turpentine are through the sap, as the specific gravity will show ; hence we say that the capillary tubes of the heart would have no more of the resinous property if cut at the proper season than is required for strength and to render it durable.

The continued use of yellow pine timber in the private shipyards of New York has proved it incontestably. We could name ships built in this city more than thirty years ago that have their first yellow pine beams in their decks; and we could point to others that have exhibited a durability unknown to our navy. Proper care should be taken to clear the timber of all sap ; and as regards shrinkage in naval vessels, if the same measures were adopted as in private yards, making strakes of planks narrow, there would be no cause of complaint. The strakes of clamps, deck plank, bulwarks and ceiling of naval vessels are too wide by at least twenty per cent.—*American Ship*,

A New Water Wheel.

One of the novelties in water wheels, patented some time since, consists of an endless belt of any suitable construction, passing over an upper and lower pulley, and fitted with a number of water buckets whose upper portions are formed with a rearward curve to permit them to pass through the water easily at the bottom of the wheel, and whose lower ends are secured to the belt by elastic connections to permit them to turn easily over the pulleys. The weight of the water in the buckets operates directly to drive the upper pulley, which, being fixed to a shaft, furnishes the desired power. The inventor claims for this simple form of water wheel a larger percentage of efficient power, with a given flow of water, than is obtained by the best turbine wheels.

ANOTHER LARGE ROLLWAY.

A correspondent of the *Lumberman's Gazette* writing from Pinconning, claims there is the largest rollway on the bay at the termination of the Saginaw Bay and Northwestern railroad. This road runs west from Saginaw Bay through Pinconning a distance of 10 miles, then north 12 miles. It has several branches from one-half to two miles in length. At the bay there are two trestles, their united length being a trifle 3,000 feet ; they stand about 20 feet above high water mark. On the line there are 22 camps in operation—three camps belonging to Yawkey & Bradley, three to H. W. Sage, two to Folsom & Arnold, and four operated by W. J. Miller & Co., the last named getting out logs for T. H. McGraw. These camps run on an average about 80 men to a camp divided into two gangs, one working in the day and the other nights. At the bay there is about 80 men divided in the same way, the former to load cars and the latter to unload. The road has six engines, five in constant use night and day, two gangs to each train, in fact we have two gangs to every thing as we run day and night.

At the bay the logs are dropped off of the trestles and rolled a distance of 600 to 800 feet, and then tiered up, and as fast as they come we keep on piling them on top so we have them all in perfect straight tiers each mark by itself, and as every camp has a mark of their own, you can imagine how they look.

They claim that at Averill they had up to the 10th of this month, 14,506,318 feet, which I think is about the right figures. We can see them on that figure and go about 12,000,000 better, for we have banked at present about 25,000,000, and if any one wishes to see the largest rollway in Michigan, and I think in any State, tell them to come to Pinconning. It won't cost them anything from Pinconning to the bay, a distance of two miles, as W. J. Miller, general manager, is a very accommodating gentleman, and any train going to the bay will be at the service of visitors. Remember that the logs are all tiered up and not dumped like nails from a keg, as at Averill. The president of the company operating this road is W. S. Gerrish, of Muskegon ; W. J. Miller, general manager.

To Fasten Cloth on Wooden Surfaces.

The following is said to be an excellent method of fastening cloth to the top of tables, desks, etc. : Make a mixture of 2¼ pounds of wheat flour, 2 tablespoonfuls of powdered rosin, and 2 tablespoonfuls of powdered allum ; rub the mixture in a suitable vessel, with water, to a uniform, smooth paste ; transfer this to a small kettle over a fire, and stir until the paste is perfectly homogeneous without lumps. As soon as the mass has become so stiff that the stirrer remains upright in it transfer it to another vessel and cover it up so that no skin may form on its surface. This paste is applied in a very thin layer to the surface of the table ; the cloth, or leather, is then laid and pressed upon it, and smoothed with a roller. The ends are cut off after drying. If leather is to be fastened on, this must be moistened with water. The paste is then applied, and the leather rubbed smooth with a cloth.

Utilizing Tide Power.

When the venerable Peter Cooper was an apprentice he invented a water wheel to utilize the natural current of the tides. His plan was to cause the waterwheel to rise and fall with the tide, at any desired speed, by the action of its own machinery. It was so arranged that the whole power could be thrown on a mill, or be made to force compressed air into a reservoir to be used as a motive power to propel ferry boats across the river. This last was done by making the hull of a ferry boat to consist of two strong iron cylinders, to provide for the boyancy of the boat, and form at the same time a reservoir for the compressed air used to drive it across the river. The wreck of the model of this tide mill is still preserved in the garret of Mr. Cooper's house.

THAT Marvellous Purifyer BURDOCK BLOOD BITTERS, will speedily change the sallow face to one of freshness, health and beauty. It regulates the Bowels, acts promptly on the Liver and Kidneys and strengthens the system when broken down by nervous and general debility. Ask your druggist for a trial bottle, the cost is only 10 cents. Large bottles $1.00.

AUSTRALIAN FORESTS.

According to the London, Eng., *Journal of Forestry* there has been a marked advance in forest conservancy in South Australia during the past year. The extent of the forest reserves has been increased by 4,762 acres, the total area now reserved being 239,368 acres. The reserves are distributed throughout various parts of the colony, but chiefly in the northern and southern districts. During the year, 906 acres have been put under a crop of trees in these reserves by planting, seed sowing, and natural regeneration which, added to the 934 acres planted in previous years, gives 1,840 acres now inclosed and put under a crop of trees by special cultivation and designated plantations. This can only be called a small beginning, considering the immense area that still remains to be treated, but it is nevertheless highly creditable to the forest board of the colony that it has accomplished this much in the short time since the board was constituted.—*Northwestern Lumberman.*

Pine Forests in Georgia.

The wanton destruction of the pine forests of Georgia is creating considerable alarm. Georgia has untold wealth in her pine forests, and yet they are diminishing rapidly and bringing but a nominal return. Georgia contains an area 35,515,526 acres. The pine belt contains nearly one-third of this area, say 11,505,174 acres. Allowing about one-half of this amount to be already taken up and employed for cultivation, milling, and turpentine purposes, we have only 5,752,587 acres left in the original forest. There was consumed during the year 1880, as near as we can estimate, a little over 250,000 acres of timber. This timber found its way to foreign markets principally, leaving but little money in the country as compensation. At this rate, it will be seen that it will only require about twenty years to destroy the last original pine in Georgia, even if there is no increase in consumption. The supply, however, is not equal to the demand now, and new mills and turpentine farms are being brought into existence continually. Certainly such a showing is calculated to alarm any thinking man. We were told by a mill-owner in southern Georgia that it requires 2,600 acres annually to supply that one. All the merchantable timber for miles on either side of the railroads, rivers and creeks has been cut and sent to market. A section of unmolested pine timber will be a fortune to any man in less than twenty years.

Wash For Outside Walls.

I have long used for whitening my dwelling and also for barns and sheds the following preparation :—Dry zinc, 1 lb ; white glue, 1 oz ; or in the same proportion of ingredients for any quantity needed.

The zinc must be ground or pulverized and dissolved in water moderately hot, stirring it thoroughly during this process. The glue is to be dissolved in a vessel by itself in the usual manner and added to the zinc mixture while hot, stirring the same during the process and for some little time afterward. The object desired is a thorough admixture of the ingredients. The preparation when ready for use should be of the consistency of ordinary whitewash. It is best applied with a wide brush. Walls treated with this mixture, which have not been limed, will preserve a pure white for several years, and will not rub off. Twelve years since I applied this mixture to my barn and sheds, and to-day it is nearly as white as when first put on, and cannot be rubbed off with the hand. If tinting for border is desired, I have no doubt that a slight admixture of lamp-black would give a leaden color. I have not used it on newly dressed surface, and do not know whether it would adhere. A good quality of dry zinc should be purchased for from 6 to 7 cents per pound.

Strength of Insects.

At a meeting of the Maryland Academy of Sciences recently Dr. Theobald showed a species of a beetle and gave the following figures :—Weight of beetle, two grains ; weight moved by it 5½ ounces—2,540 grains, or 1,320 times the weight of the beetle. A man weighing 150 lbs., endowed with the strength of this insect, should therefore be able to move 198,000 pounds, or nearly 100 tons.

E. S. VINDIN,

Commission, Shipping, Forwarding and General Agent.

LUMBER MERCHANT

Office, Tempest's Block, Port Hope. L11

D. S. BRIGGS,

9 TORONTO STREET, TORONTO.

WHOLESALE DEALER IN

Clear, Pickings, Common and Hardwood Lumber, Lath, Shingles, &c.

BILL STUFF CUT TO ORDER. L12-1y

J. K. POST & CO.

LUMBER MERCHANTS

And Shipping Agents.

OSWEGO, N. Y. L12-1y

JAMES HADDEN,

MANUFACTURER OF

Shingles and Dressed Stuff.

Foxmead, P. O., County of Simcoe, Ont.

Two Planers for sale or exchange for a Boiler. b26

White Oak and Ash

LUMBER WANTED.

ADDRESS

YATES AND STRATFORD,

b **BRANTFORD.** 15

New Files Manufactured from the BEST English Cast Steel and Warranted equal to the Best Imported File.

FILES

Old Files RECUT BY HAND, and EQUAL TO NEW FOR USE

PRICE LIST on application.

THOS. GRAHAM, Manufacturer,

35 Sherbourne St., Toronto. 6L11

To Lumbermen.

The Subscriber makes to order all kinds of

TENTS,

Hammocks, Tarpaulins, Waggon and Horse Covers,

☞ **Also dealer in all kinds of OIL SKIN Clothing, Nets and Seine Twines.**

An is also Agent for the best makes of AMERICAN COTTON DUCKS in all widths.

J. LECKIE,

6L12 46 Front Street E., TORONTO.

M. BRENNEN,

MANUFACTURER AND WHOLESALE DEALER IN

Lumber, Lath and Shingles,

63, 65 and 67 King William Street,

HAMILTON, ONT

MILLS AND TIMBER LIMITS AT SILVER CREEK, TIAGO P. O., ONT.

Bill Stuff cut from 10 to 60 feet. Cedar Posts on hand.

Orders sent to M. BRENNEN, Tiago, P. O., will receive prompt attention b15

WANTED

A COMPETENT MAN, with thorough knowledge of Tram Railways, to go to Jamaica, to take charge of the laying and keeping in order the rails and road bed of a ten mile tramway, and when not employed to make himself otherwise useful. To a first-class competent man good salary will be paid.

Address, with references and salary expected,

The Waterous Engine Works Co.,

6L12 Brantford, Canada.

IRWIN & BOYD

Commission Lumber Dealers,

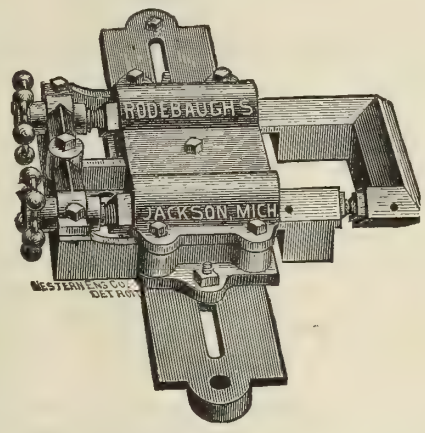
FORWARDERS,

Shipping and General Agents

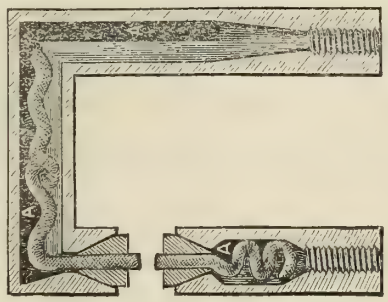
PORT HOPE.

SAW GUIDE!

Self Oiling—Ready Adjusting.



G. W. Rodebaugh's patent Saw Guide will recommend itself to every practical sawer. All that is required is a trial.



No heating of Saws. No danger in setting. Trial free of charge. ☞ The whole complete only $25. Manufactured in Canada by

KERR BROS., Walkerville, Ont.

who may be applied to for further particulars; or address:

G. W. RODEBAUGH & CO.,

b15 WINDSOR, ONT

WITH THE TOMLINSON

(PATENT)

BARREL MACHINE

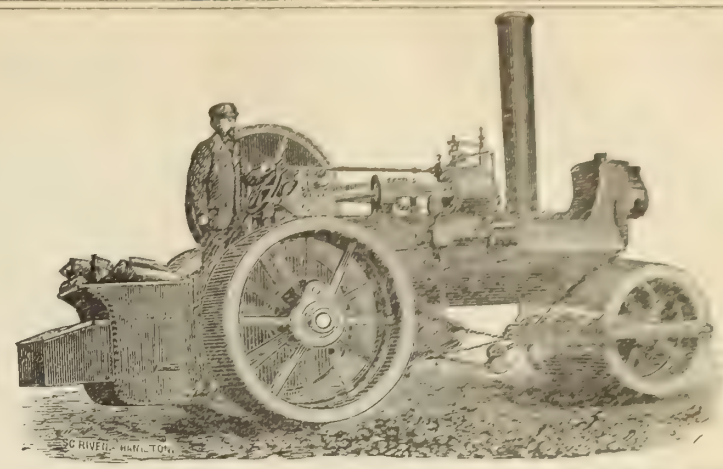
One man and two boys can turn out

One Hundred and Fifty First-class Flour Barrels in Ten Hours,

made from veneered wood of two thicknesses. The inside is one solid sheet of veneer running around the barrel, making in reality one hoop from top to bottom, and in the outside thickness the grain is reversed, running up and down, finished with five hoops two inches wide, reversed again, making the barrel almost three thicknesses, which gives the package superior strength, tightness and durability over the ordinary hand-made flour barrels, yet with all its many advantages cost less than the old style of package. My barrel machine is arranged to make all sized packages from a large barrel down to small nail kegs, butter packages and cheese boxes. I am open to prove at any time the superior strength of my barrel. That one will stand more hardship by any actual test than one hundred of the old ordinary flour barrels. County rights for sale, and all information given by applying to

JAMES TOMLINSON, Patentee,

113 KING ST. EAST, TORONTO. b15



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J. H. KILLEY & Co.

Manufacturers of Economical, Variable, Cut-off, High Pressure, and

Condensing Engines

Patent Circulating and Self-Cleansing Boilers, Improved Feed Water Heaters and Patent Steam Blast Apparatus for Improving Draft and Economizing Fuel,

First-class Grist & Saw Mill Engines and Machinery

STEAM ROAD ROLLERS and STONE BREAKERS. 6L12

FOR READY-MADE CLOTHING

This House stands at the head, having manufactured Clothing in Toronto for over Forty Years, and always gave satisfaction to customers. ☞ THEY IMPORT THEIR OWN WOOLLENS FROM EUROPE, and Manufacture the Clothing on the premises.

GENTS' ALL WOOL SUITS, $7.50, $9.00 and $12.00

GENTS' FINE WORSTED SUITS, $11.75, $15.00 and $18.00

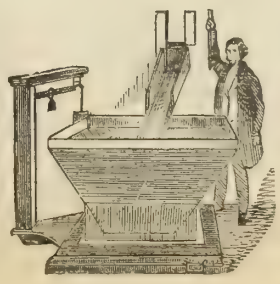
GENTS' SHIRTS, UNDERCLOTHING, TIES and GLOVES

R. WALKER & SONS,

GOLDEN LION, KING STREET, TORONTO. b19

WHITE'S CANADA STANDARD

MANUFACTURED AT



The Canada Scale Works!

These Scales are Manufactured of the Very Best Material, and warranted to give satisfaction. Send for Prices and Testimonials.

JAMES C. WHITE & CO.

b15 102 Adelaide St. East, Toronto

Market Reports.

Montreal.

Ash, 1 to 4-in, ₱ M	$15 00@17 00
" square ₱ M	22 00@25 00
Basswood, ¾-in, ₱ M	13 00@15 00
" 1-in., "	14 00@17 00
Black walnut, culls, ₱ M	55 00@60 00
" 2nd quality, ₱ M	85 00@90 00
" 1st "	100 00@105 00
Cedar, round, p ft	0 09@ 0 12
" flat, "	0 08@ 0 10
" square "	0 10@ 0 12
Grey elm, 1st quality, ₱ M	22 00@27 00
Rock " "	35 00@40 02
Spruce, 1 to 3 in., ₱ M	8 00@ 9 00
" square, "	12 00@14 00
Red oak, ₱ M	35 00@40 00
Pine, clear, 1st quality, ₱ M	35 00@45 00
" 2nd "	21 00@27 00
" 3rd "	12 00@15 00

Chicago.

The volume of shipments has largely increased during the week, the reported shipments being over 7,000,000 feet greater than for the corresponding week of last season, and the actual shipments reaching 27,757,000, or an average of 4,500,000 feet per day. Prices are reported firm, and we can learn of nothing which should lead to a doubt of the correctness of the claim.

A buoyant feeling is manifest among the dealers and all are looking forward to a short and active season, the gross results of which will exceed anything heretofore known. This feeling so far as we can learn is shared by the trade everywhere.—*Northwestern Lumberman.*

STOCK ON HAND MARCH 1.

	1881.	*1880.*	*1879.*
Lumber	322,491,234	263,452,591	234,106,246
Shingles	125,648,264	113,593,000	129,180,000
Lath	33,388,899	30,126,770	24,587,479
Pickets	1,589,064	849,238	376,299
Cedar posts	79,887	47,797	306,544
Hardwood	11,000,000	.....	.....

YARD QUOTATIONS—CAR LOTS—DRY.

FINISHING LUMBER—ROUGH.

1st, 2d clear, 1, 1¼ and 1½ in	$43 00
1st and 2d clear, 2 in	45 00
1st and 2d clear, 3 in	50 00
3d clear, 1¼, 1½ and 2 in	38 00
7 and 8 inch clear	32 00
Select 1 in. A	32 00
Select B	22 00
1¼, 2 in. B	26 00
7 and 8 in. B	26 00
Clear and Select 2x4	28 00
2x6 and 2x8	32 00

All one length $1 extra.

WAGGON-BOX STUFF.

3-in and up. A	$43 00
4-in. and up. B	37 00
14-in. and up. C	28 00
D	17 00

All 14 feet $2 extra.

STOCK BOARDS.

12 in. A, 12 to 16 ft	$37 00
12 in. B	33 00
12 in. C	28 00
12 in. D, 12, 14 and 16 ft	17 00
12 in. D, 18 ft	19 00
12 in., 20 ft	20 00
10 in. A	35 00
10 in. B	30 00
10 in. C	24 00

COMMON BOARDS—ROUGH.

	Dry.
Common boards, 12 in	$15 50
10 and 20 ft	14 50
12, 14, 16 and 18 ft	14 00
Culls, all lengths	11 50
1¼ and 1½ com	13 50

TIMBER AND DIMENSION—DRY.

Small timber, 18 ft. and under	$12 00
12, 14, 16 and 18 ft. joist	13 00
2x4, 10 and 20 ft	14 00
2x4, 18 ft	13 00
20 feet	14 00
22 feet	17 00
24 feet	17 00
26 feet	20 00
28 feet	20 00
30 feet	20 00
2 in. cull plank, all widths	9 00
2x4 culls, all lengths	9 50

SHINGLES—16-INCH—DRY—CAR LOTS.

Clear	$3 25
Extra A	3 00
Standard A	2 90
Cedar shingles	$2 00@2 50

Ends of cars and less than car load lots, five cents per thousand extra. The shingles handled in the Chicago market are all 16-inch.

PICKETS—LATH.

Flat, select and clear, d. and h	$20 00
Square, d. and p	20 00
Flat, rough, good	15 00
Flat, rough, common	11 00
Dry lath	2 25

CEDAR POSTS AND POLES.

Sawed ½ of 6½ in., 7 ft	$19 00
½ 6 " 7 ft	10 50
½ 7 " 7 ft	12 00
½ 8 " 7 ft	16 50
¼ 8 " 7 ft	9 00
¼ 9, 10, 11 and 12 in., 7 ft. long	12 00
4 in., round, full length	12 00
5 " " "	16 00
6 " " "	20 00
7 " " "	22 00
8 " " "	30 00
10 feet, per inch	6 00
12 " "	9 00
14 " "	10 00
16 " "	$11 00@13 50
20 " "	16 00

Boston.

The distribution continues to gradually improve, and although the demand is not yet very large, dealers show no desire to dispose of any stock at "off" rates, and are continuing to make additions to their supply, especially in the finer grades. Nearly all of the inferior kinds have been in the market in sufficient quantities to give an easy tone to prices, although, as a general rule, dealers are more disposed to hold than to sell below "card" rates. The finer grades have been limited in quantity, and prices are firm. Hardwoods still continue scarce, and sell well at high prices.

CANADA PINE.

Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
do do 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

Albany.

Quotations at the yards are as follows :—

Pine, clear, ₱ M	$50 00@60 00
Pine, fourths	45 00@55 00
Pine, selects	40 00@50 00
Pine, good box	17 00@28 00
Pine, common box	14 00@17 00
Pine, 10-in. plank	38 00@42 00
Pine, 10-in. plank, culls	21 00@23 00
Pine boards, 10-in	25 00@28 00
Pine, 10-in. boards, culls	17 00@18 00
Pine, 10-in. boards, 16 ft., ₱ M	28 00@00 00
Pine, 12-in. boards, 16 ft	28 00@00 00
Pine, 12-in. boards, 13 ft	28 00@00 00
Pine, 1¼ in. siding, select	42 00@00 00
Pine, 1¼-in. siding, common	18 00@00 00
Pine, 1-in. siding, select	40 00@00 00
Pine, inch siding, common	16 00@00 00
Shingles, shaved, pine	6 00@00 00
" 2nd quality	4 50@00 00
" extra, sawed, pine	4 25@00 00
" clear, "	3 25@00 00
" cedar, mixed	2 75@00 00

Oswego, N.Y.

Three uppers	$42 00@45 00
Pickings	32 00@35 00
Fine, common	20 00@25 00
Common	14 00@16 00
Culls	12 00@14 00
Mill run lots	16 00@20 00
Sidings, selected, 1 inch	30 00@33 00
" 1¼ inch	30 00@38 00
Mill run, 1x10, 13 to 16 ft	16 00@20 00
selected	20 00@25 00
shippers	15 00@16 00
Mill run, 1 and 1¼ inch strips	15 00@18 00
Culls, selected	22 00@30 00
Culls	11 00@13 00
1x6 selected for clapboards	24 00@35 00
Shingles, XXX, 18 inch, pine	3 50@ 3 75
XXX, 18 inch, cedar	3 00@ 3 50
Lath	1 50@ 1 75

Buffalo.

We quote cargo lots :

Uppers	$35 00@40 00
Common	16 00@19 00
Culls	11 00@12 00
Dressing stocks	18 00@20 00
Dressing sidings,	17 00@19 00

Tonawanda.

CARGO LOTS—MICHIGAN INSPECTION.

Three uppers	$38 00@40 00
Common	17 50@19 50
Culls	15 00@17 00

British Imports.

The British Board of Trade Returns for February show the import of woods into the United Kingdom during the month ending February 28th, 1881, and in the two months ending February 28th, 1881, compared with the corresponding period of last year to be as follows:—

FOR THE MONTH OF FEBRUARY.

	Quantity.	*Value.*
Timber, (hewn) 1880	3,354,000 ft.	£132,019
do do 1881	3,500,200 "	256,900
Increase	148,200 ft.	£124,881
Timber, (sawn or split or dressed) 1880	2,773,850 ft.	£142,296
do do 1881	2,178,650 "	133,063
Decrease	595,200 ft.	£9,233

FOR THE TWO MONTHS ENDING 28TH FEBRUARY, 1881.

	Quantity.	*Value.*
Timber, (hewn) 1880	6,815,400 ft.	£263,632
do do 1881	7,172,250 "	404,512
Increase	356,850 ft.	£141,080
Timber, (sawn or split or dressed) 1880	5,314,150 ft.	£268,526
do do 1881	4,701,350 "	268,453
Decrease	612,800 ft.	£73

Freight Rates.

The rate of freight on lumber from Belleville to Oswego has not yet been established, as shippers only offer 90 cents while vessel-men are asking $1.25. There are plenty of vessels at that port, so that the latter will likely have to moderate their demands.

The English Wood Market.

James Smith & Co.'s Liverpool Wood Circular of April 5th says :—The arrivals since our last have been 17 vessels, 12,624 tons, against 30 vessels, 14,635 tons, in corresponding period last year ; and 8 vessels, 5,139 tons in 1879 :—

FROM 26TH JANUARY TO 31ST MARCH, 1881.

	Vessels.	*Tons.*
Quebec	1	921
St. John, N.B., &c	4	3,734
United States	18	19,458
Baltic	6	1,993
Total	29	26,106

FROM 26TH JANUARY TO 31ST MARCH, 1880.

	Vessels.	*Tons.*
Quebec	*Nil.*	*Nil.*
St. John, N.B., &c	9	9,815
United States	7	5,543
Baltic	26	9,056
Total	42	24,414

FROM 25TH JANUARY TO 29TH MARCH, 1879.

	Vessels.	*Tons.*
Quebec	*Nil.*	*Nil.*
St, John, N.B., &c	7	6,483
United States	9	8,630
Baltic	7	3,021
Total	23	18,134

Business during the month has been excessively dull, and buyers generally exhibit a want of confidence in the future ; therefore, sales both by private and by public auction have been unsatisfactory to sellers. It is now to be hoped that the fine weather may have some beneficial effect, although for some time to come the stock will be ample, and shippers should curtail supplies as much as possible. Freights are without change, and money continues cheap.

COLONIAL WOODS.—Of yellow pine timber there have been no fresh arrivals during the past month ; the stock is comparatively heavy, and the consumption has been moderate. The sales have been by private only, as the parcel of Quebec waney board recently offered at auction was not sold. Red pine is in dull demand, and the stock ample ; there are no sales reported. Of elm there is an ample supply, and the consumption during the month has been on a small scale. Of oak there has been an improved consumption, but the stock still remains heavy, being 444,000 feet against 361,000. A parcel of 650 planks, cut to waggon size, was offered at auction, but did not meet with a purchaser. Black walnut—There has been a good demand, and several parcels realized at auction 5s@6s per foot. Of birch there have been no fresh arrivals, but the stock, which consists of 140,000 feet, will be sufficient until the fresh import comes in. There have been no sales during the month. The parcel of 483 logs, which was offered at auction a few days ago, was withdrawn, and afterwards sold privately at 14¾d per foot. N.B. and N.S. spruce deals have been sold freely by private at from £6 17s 6d@£7 per standard for St. John's and other good shipments, all from the yard ; but for shipment under contract the sales have been at from £6 15s@£7 per standard, and Pugwash at £6 5s per standard c.i.f. By auction the cargoes (sold "without reserve") ex Minnie Gordon, from Richibucto, averaged £6 17s 6d per standard, and ex Gulnare, from Bay Verte, averaged £6 14s 6d per standard, and a few days ago the cargo of St. John's deals, ex Flying Foam (old deals), realized from £6 5s@£7 12s 6d, and averaged about £7 per stnadard. The stock is being reduced, and the consumption as compared with the same time last year has greatly improved. There is still a good inquiry from the Continent, and it is probable the present prices will now be fully maintained. Of pine deals the stock is light, but there is not much demand for these at present. A small lot from St. Margaret's Bay of 1st, 2nd and 3rd quality was sold at £7 per standard. Quebec pine deals are very heavy in stock, but the consumption is improving ; the sales have been by auction for 3rd quality at £9 10s@£11 12s 6d for board deals, and at £8@£9 7s 6d for 11-inch and under the 1st and 2nd quality were withdrawn unsold. Quebec pipe and West India staves are in fair demand. Palings and lathwood are easily disposed of ; the latest sales of palings were 70s for 5x1 inch ; and 55s for 4x¾ inch.

HEADACHE.—Why become a suffering martyr to Headache, when BURDOCK BLOOD BITTERS will surely cure the cause of all varieties of Sick and Nervous Headache, cleanse the system, regulate the secretions, relieve constipation of the bowels, purify the blood, renovate the liver and tone up the nervous system, and distressing headache will be unknown. Sample bottles 10 cents. Large bottles $1.00.

Liverpool Timber Sales.

On Friday, April 1st, Messrs. Farnworth & Jardine offered a cargo of spruce deals from St. John, N.B., stored in the yard, consisting of about 35,000 pieces, of which about two-thirds was sold by auction, chiefly to the local trade, and the remainder was probably closed by private treaty after the auction was over. Two or three parcels of Quebec pine deals were offered, chiefly 1st and 2nd quality, but there was no disposition to buy, and the goods were withdrawn. A parcel of 5,700 3rd quality bright sold as per particulars below :—

Spruce deals, St. John, N.B.—

	£	s.	d.		£	s.	d.
20 to 25 ft. 3×11	7	15	0				
16 " 19 " 3×11	7	12	6				
12 " 15 " 3×11	7	5	0				
9 " 11 " 3×11	6	15	0	to	6	17	6
16 " 19 " 3×9	7	7	6				
12 " 15 " 3×9	7	0	0				
9 " 11 " 3×9	6	15	0				
16 " 19 " 3+7	6	15	0				
12 " 15 " 3×7	6	10	0				
9 " 11 " 3×7	6	5	0				
9 " 26 " 2½×7	7	7	6				

Pine deals, Quebec, 3rd quality bright—

12 ft. 3×16 to 20	11	2	6
12 " 3×12 " 15	10	2	6
11 " 3×12 " 19	9	10	0
11 " 3×11	9	7	6
11 to 13 " 3×7 " 10	8	7	6
13 " 3×9	8	10	0
13 " 3×7 & 8	8	0	0

Glasgow.

During the week several extensive auction sales have been held, as detailed below, and afford a good indication of the state of the market here. The first was held at Greenock on the 31st March, when a large amount of business was done—say about 1,000 pieces log timber and 70 lots deals changing hands.

At the sales of deals held here on the 6th April, there was a fair company, but merchants and consumers were evidently disposed only to buy sparingly (as regards pine deals especially), although tempting offers were made of some lots at very moderate rates. On the whole the market for pine deals here at present is by no means active. This state of things, however, may only be temporary, as the stock of ordinary useful deals is not large comparatively.

The spruce deals, particularly the long lengths and favorite breadths, met with fair competition. Some lots of the narrow sorts, or 7×3, were withdrawn :

Quebec 1st yellow pine deals—

12 ft. 17/20×3	2s. 10½d.	p. c. ft.
12 " 15/16×3 } 10 " 14/21×3 }	2s. 8d	"
12 " 15×3 } 11 " 14/21×3 }	2s. 7d	"
10 " 12/21×3	2s. 6½d.	"
12 " 14×3 } 9 " 15/21×3 }	2s. 6d	"
10 " 12/14×3	2s. 4d.	"
9 " 12/21×3	2s. 3½d.	"
12 " 10×3	2s. 2d.	"

Do. ends, 6 to 8 ft. 7/11×3, 1s. 11d, and 1s. 10½d. per cubic ft.
Do. floated deals, 9 to 11 ft. 9/10×3, 2s. p. c. ft.
Do. 3rd do., 12 ft. 15/20×3, 1s. 3½d. p. c. ft.

On 6th April, at Glasgow, Messrs. Hunter, Sheriff & Co., brokers (following Messrs. Geo. Gillespie & Co's sale) :—

St. John, N.B., spruce deals—

19 to 24 ft. 11×3	1s 0½d.	p. c. ft.
15 & 13 " 11×3	1s. 0½d.	"
16 " 11×3 } 10 to 22 " 13×3 }	1s. 0¼d.	"
11 " 21 " 14×3	1s.	"
9 to 12 & 14 " 11×3 } 9 to 22 " 12×3 } 17 " 23 " 9×3 } 12 " 9×3 }	11¾d.	"
13 & 14 " 11×3 } 16 " 9×3 }	11½d.	"
9 to 11 " 9×3	10¾d.	"
9& 10 " 7×3	9½d.	"
9 to 23 " 6×3	10d.	"
10 " 21 " 7×2½	10d.	"
9 " 22 " 3/6×3 & 2½	9½d.	"

Do. ends—

6 to 8 " 7/14×3	9¾d.	"
8 " 5 " 7/14×3	8¾d.	"

Do. 4th spruce deals—

9 to 22 ft. 11×3 } 9 " 22 " 9×3 }	9d.	"
9 " 22 " 12/14×3	8¾d.	"
9 " 23 " .7×3	8½d.	"

St. John, N.B., pine deals—

10 to 24 ft. 11 & 13×3	1s	"
10 " 26 " 9×3	10¾d.	"
10 " 14 " 7×3	9¾d.	"

Quebec 1st pine deals A—

13 ft. 11+3	2s. 3¾d.	"
11 " 12/15÷3	2s. 4d.	"
11 " 11÷3	2s. 2d.	"
13 " 6÷3	1s. 10½d.	"
10 " 6÷3	1s. 10d.	"
6 to 16 " 6÷8	1s. 9d.	"
Do. 2nd do. 8 to 14 ft. 6÷3	1s. 5d.	"

"Hail Beauteous, Bounteous, Gladsome Spring"—this was Mark Twain's prize poem—but the dire diseases incident to spring, spoil the romance. Burdock Blood Bitters is the prize remedy, the remedy prized by all who have tried it as the best Blood Purifying Tonic and System Regulator in the market. It cures all Blood Humors from the worst Scrofula to a common Pimple. Sample bottles 10 cents. For sale by all dealers in medicine.

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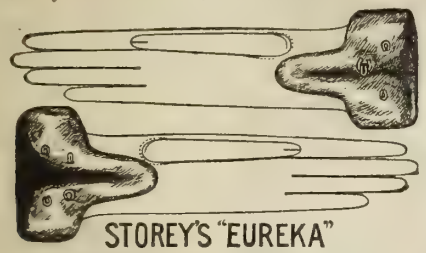
GLOVE MANUFACTURERS.

The best description of GLOVES and MITTS in every variety of material and style manufactured by us. b15



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SPRING GLOVE FASTENER, PAT?

S. R. WARREN & SON,

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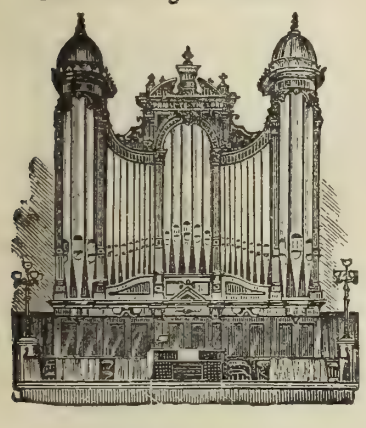

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Lance Tooth

CROSS-CUT SAW!

It stands without a rival, and is the fastest cutting saw in the world. It has beaten the best Canadian and American made saws 33⅓ per cent in every contest. Its superiority consists of its excellent temper. It is tempered under the secret Chemical Process, which toughens and refines the steel. It gives a finer and keener cutting edge, and will hold it twice as long as any other process. We have the sole right for this process for the Dominion of Canada.

None genuine that are not like the above cut, with registered trade mark with the word "The Lance," and Maple Leaf with our name. Price $1 per foot.

CAUTION.—Beware of Counterfeits. There are inferior counterfeits on the market, which are intended to be sold at a high price upon the reputation of this saw. We will send to any address a saw exactly like any counterfeit, warranted equal in quality or no sale, at 60c. per foot. Therefore do not be humbugged into paying a first-class price for a second-class saw. A fact to bear in mind is that if the material and temper are not of the very best quality the shape of the teeth amounts nothing. A saw, like a knife, will not cut if set without it will hold a keen, cutting edge. We have cut off a 14-inch sound basswood log in eight seconds with this saw. Manufactured only by

SHURLY & DIETRICH,

Manufacturers of Saws, Plastering Trowels, Straw Knives, &c. &c.

GALT, ONTARIO. b15

This cut is a simile of Package.

The greatest tribute to its extraordinary merits is, that it was awarded First Prize and Diploma at

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Hamilton " "
London " "
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over all other yeasts.

TRY IT, AND BE CONVINCED.

Ask your Grocer for it, or send direct to the factory. PEARL YEAST COMPANY, 39 Front Street, Toronto, Box 1264, b15

READ THIS!

Irish Canadian Office.
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MR. F. CRUMPTON,

Dear Sir,—The watch I purchased from you some time ago, has given perfect satisfaction, and I am much pleased with it, and can *cordially recommend* any person in need of a watch or anything in the jewelry line, to deal at your store. Yours very truly,

PATRICK BOYLE,
Proprietor *Irish Canadian*

Send for our new price list of Watches, Diamonds, Silverware, Jewellery, &c., sent post prepaid on application. Goods sent C. O. D. to any part of Canada. We have dozens of testimonials similar to the above, plainly showing that 83 King St. East is the place to buy your goods.

F. CRUMPTON,
83 King Street East,
TORONTO. b30

Wrought Iron Shanty Cook Stoves

The Best Article ever offered to the Trade.

I have much pleasure in drawing attention to my **WROUGHT IRON COOKING STOVE, for Shanty, Hotel and Boarding House use.** These Stoves are made of **Heavy Sheet Iron,** the top and lining of the fire-box being of **Heauy Cast Metal** and all the connecting parts of substantial **Wrought Iron Work.** The dimensions of these Stoves are as follows:

SINGLE OVEN STOVE

Top surface contains six 10-inch holes, with ample room between, and one oven 16 x 24 x 26.

DOUBLE OVEN STOVE

The Double Oven has a top surface containing twelve 10-inch pot holes, with two ovens, each 16 x 24 x 26. One fire-box of suitable size for area to be heated. Below will be found Testimonials from some of the leading Lumbermen, who have used my Wrought Iron Cook Stoves since I ommenced manufacturing them. They are the names of gentlemen who are well known and eliable, and will carry more weight than any recommendation of my own could do.

The Best Stove I have ever Used.

PETERBOROUGH, May 31, 1880.

ADAM HALL, Esq., Peterborough. Dear Sir,—I have used your Wrought Iron Cooking Stove in our lumbering operations since its introduction here, and have no hesitation in saying that I prefer it to any other. For durability, economy and efficiency, where a large number of men are employed, it is the best stove I have ever used. You can, with confidence, offer it to hotels, boarding houses and lumbermen.

Yours truly, THOS. GEO. HAZLITT.

The Stove for Lumbermen.

PETERBOROUGH, June 1st, 1880.

ADAM HALL, Esq., Peterborough. My Dear Sir,—We have used your Wrought Iron Cooking Stove and find it is very satisfactory for lumber operations, especially so on drives. We can recommend it highly.

Yours truly, IRWIN & BOYD,

Gives the Greatest Satisfaction.

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A. HALL, Peterborough. Dear Sir,—I have had the Wrought Iron Cook Stove, purchased from you, in constant use ever since last fall, and it gives the greatest satisfaction in every respect. I can recommend them highly to any one who is in the lumber business. Very truly yours, GEO. HILLIARD, M.P.

EVERY STOVE GUARANTEED

All the necessary TINWARE and CUTLERY for Shanties supplied at the Lowest Prices.

ADAM HALL, Peterborough.

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LEATHER BELTING

First Prize, Provincial Exhibition	Ottawa, 1875
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International Medal, Centennial Ex.	Philadelphia, 1876

None genuine unless with a STAR on the head of rivets. Send for Price Lists and Discounts. b16

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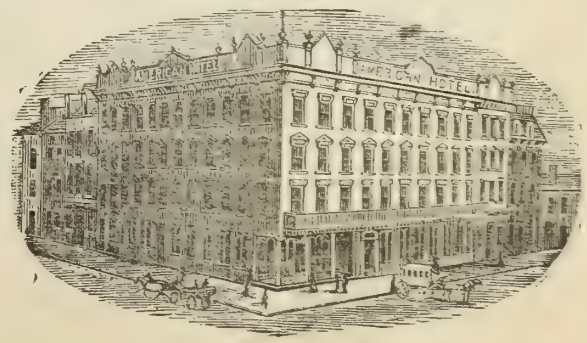

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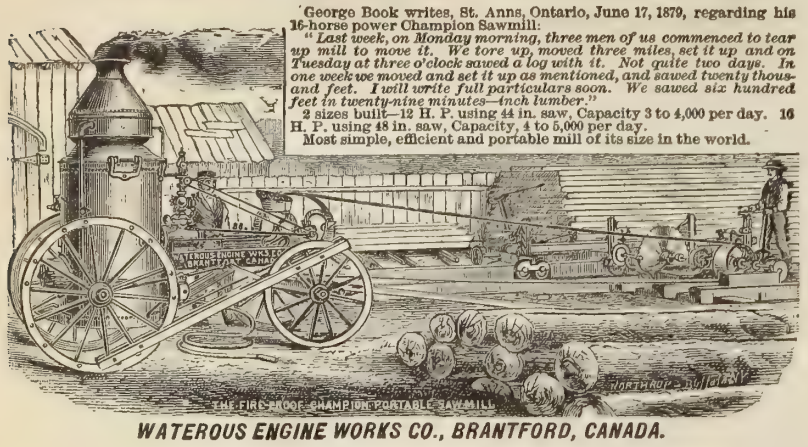

George Book writes, St. Anns, Ontario, June 17, 1879, regarding his 16-horse power Champion Sawmill:
"Last week, on Monday morning, three men of us commenced to tear up mill to move it. We tore up, moved three miles, set it up and on Tuesday at three o'clock sawed a log with it. Not quite two days. In one week we moved and set it up as mentioned, and sawed twenty thousand feet. I will write full particulars soon. We sawed six hundred feet in twenty-nine minutes—inch lumber."
2 sizes built—12 H. P. using 44 in. saw, Capacity 3 to 4,000 per day. 16 H. P. using 48 in. saw, Capacity, 4 to 5,000 per day.
Most simple, efficient and portable mill of its size in the world.

WATEROUS ENGINE WORKS CO., BRANTFORD, CANADA.

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All our Clothing is Cut and Made on the Premises, by first class competent Workmen, and quite equal to Ordered Clothing

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VALVOLINE
For Lubricating
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It leaves no Deposit, and Preserves the Metal.

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The Best Value in the Market!

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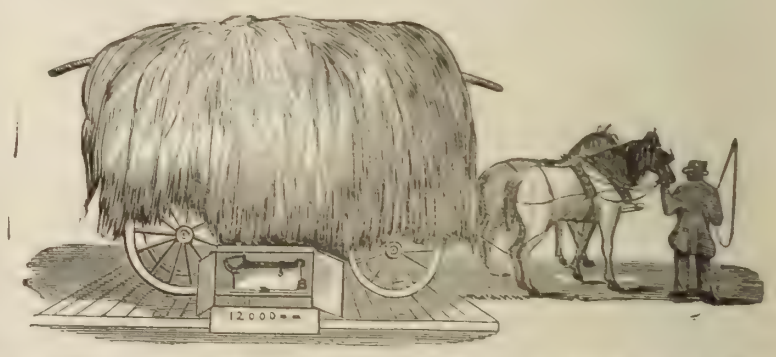

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The Bell Organs have just received the HIGHEST AWARD and SPECIAL PRIZE (Gold Medal) at the International Exhibition, Sydney, Australia, this year for their Organs over all the English and American makers. This along with the unlimited awards, prove that

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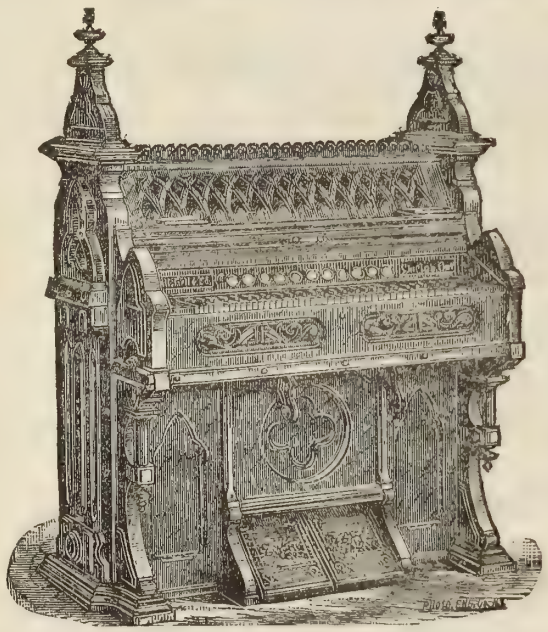
Medal and Diploma.....Centennial Exhibition, 1876
International Medal & Diploma, Sydney, Aus. 1877



Only Medal for Parlor Organ, Provincial Ex., 1878
Only Medal for Parlor Organ, Industrial Ex., 1879
And Gold Medal.....at Sydney Australia, 1880

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The Bell Organ Manufactory is the Largest and Oldest in the British Empire, and the fact that we have sold nearly 15,000 proves that they are the best in the market. ☞We guarantee all our Organs for five years. Correspondence invited. Illustrated Catalogue mailed free.

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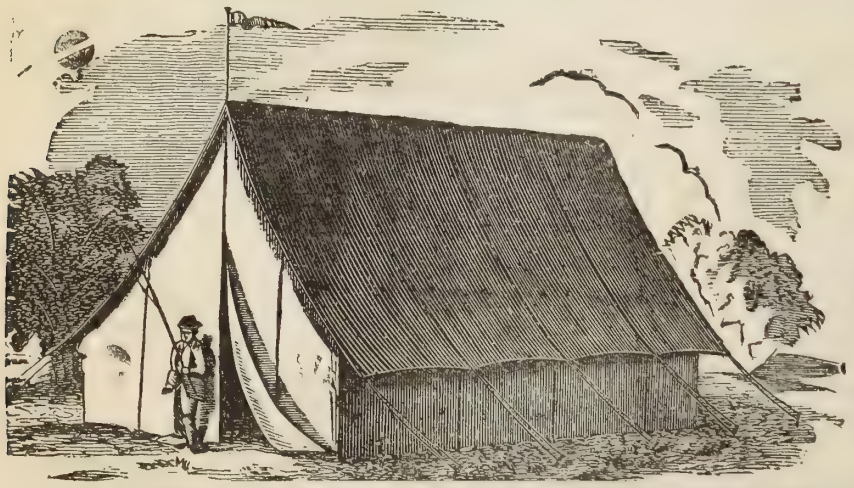
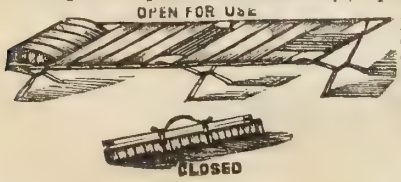


manufacturers of Tents for Lumbermen, Sportsmen, Camp Meetings, Photographers, Lawn and military Encampments, with or without extra roofs, all sizes and styles, white or fancy striped, Mildew proof or plain. Prices from $5, upwards. Flags of all descriptions, (regulation sizes) made of the best of silk-finish bunting. CAMP BEDS (Bradley's Patent) the best bed ever invented; size when folded 2 x 6 in.; 3 feet long, weighing only 11 pounds, but strong enough to bear the weight of any man. Waterproof wagon and horse-covers, tarpaulins sheets, coats and leggings of every description made to order on the premises. ☞Special rates to Lumbermen. Send for catalogue and price list to



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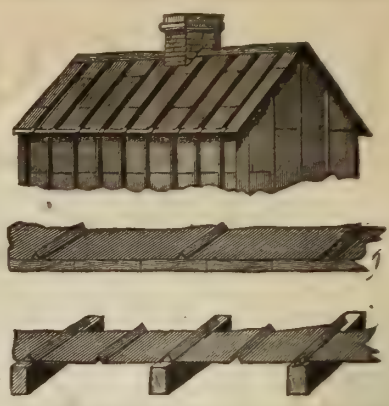

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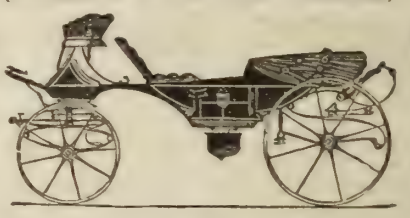

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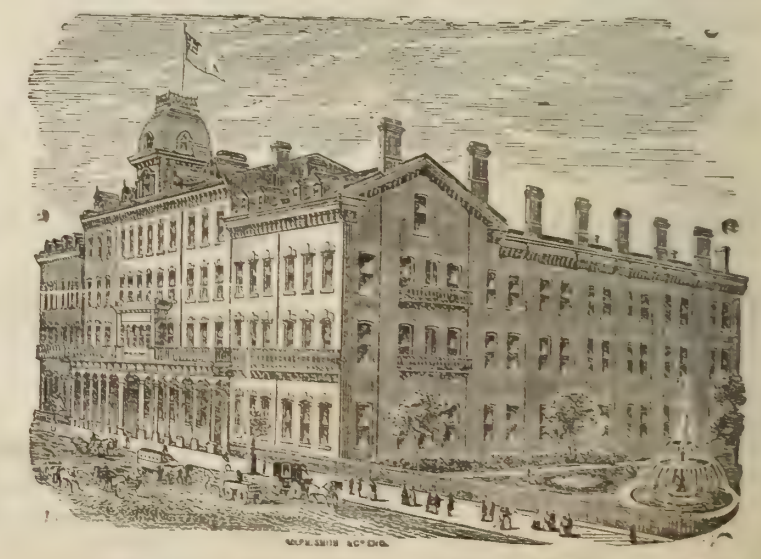

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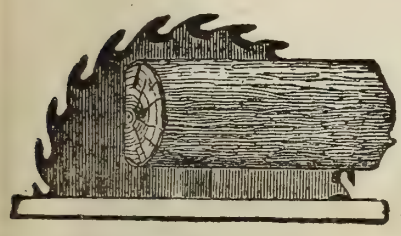

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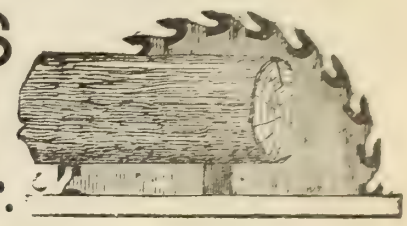

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EVERY SAW WARRANTED.

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Manufacturers of Marine and Horizontal and Portable Engines, Boilers, Grain Elevators and Steam Hoists, Saw and Flour Mill Machinery,

with latest improvements, a specialty.

The Abel Edward's Centennial Turbine Water Wheel.

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Water-works, the latest and most improved, made to Order.

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Plans and Specifications on application.

The Walkerville Foundry

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MACHINE WORKS.

Walkerville, Ont., Dec., 1880. b15

National Pills, superior to all other purgatives in strength and virtue, in safety and mildness of action.

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Nos. 115, 117, 119, 121, King St. East, Toronto.

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We carry a STOCK of FIFTY THOUSAND DOLLARS to choose from.

We watch the interest of our Customers. Our stock is full of the very best goods in Scotch, English and Canadian Tweeds.

We BUY and SELL for Cash, therefore it enables us to do business on very SMALL PROFITS.

NOTE THE PRICES.

We give a Good Tweed Suit for.....$6 00
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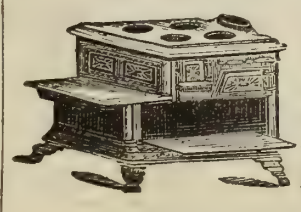

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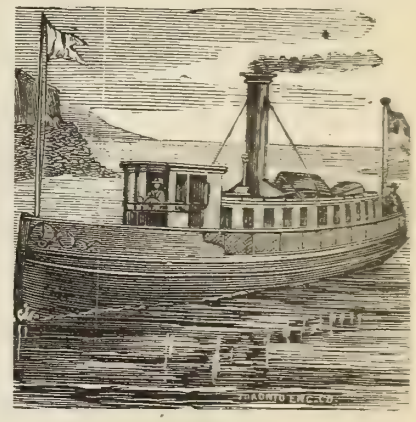

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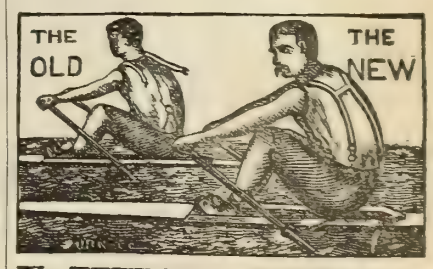

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SOME REASONS why they are the best:—

1st.—No Elastic requied.
2nd.—Is slack when stooping.
3rd.—It never slips off the shoulders.
4th.—Sold at prices of common suspenders.

Manufactured by C. E. RAMAGE & CO.

b14 20 Queen St. East, Toronto.

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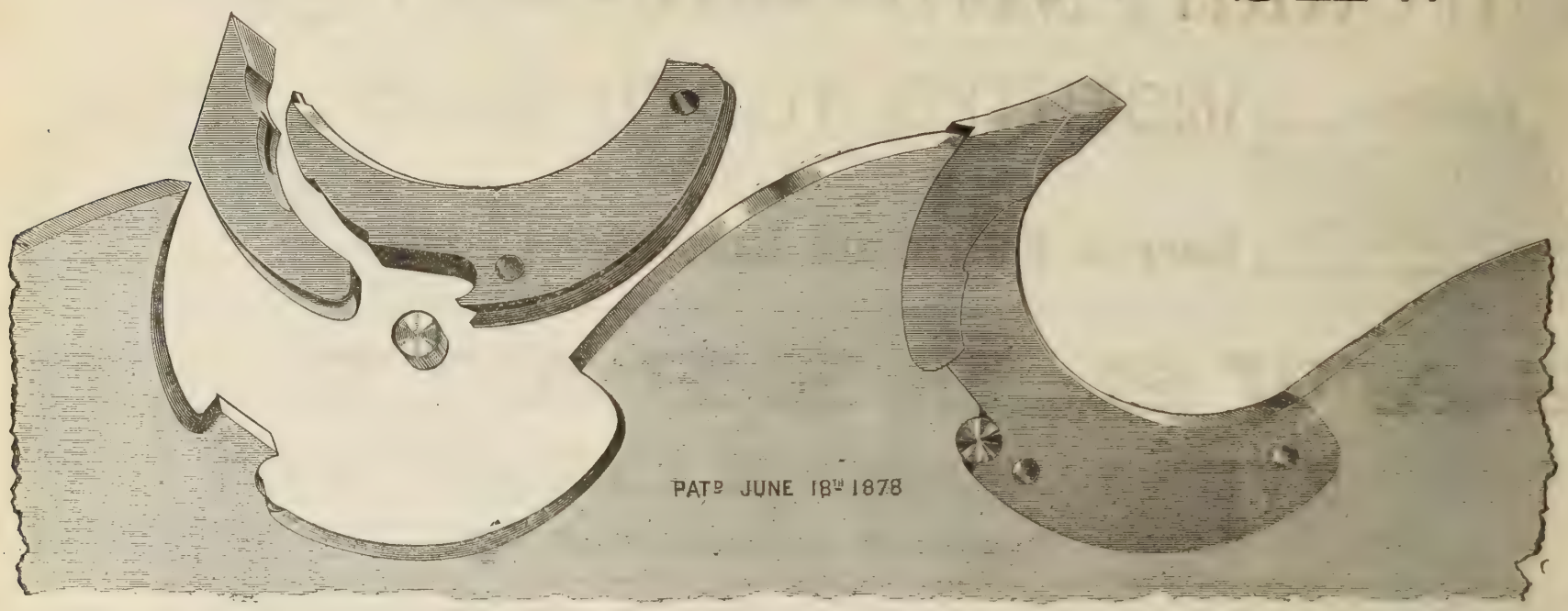
MANUFACTURERS OF

Every Variety of Circular, Mill and Gang Saws

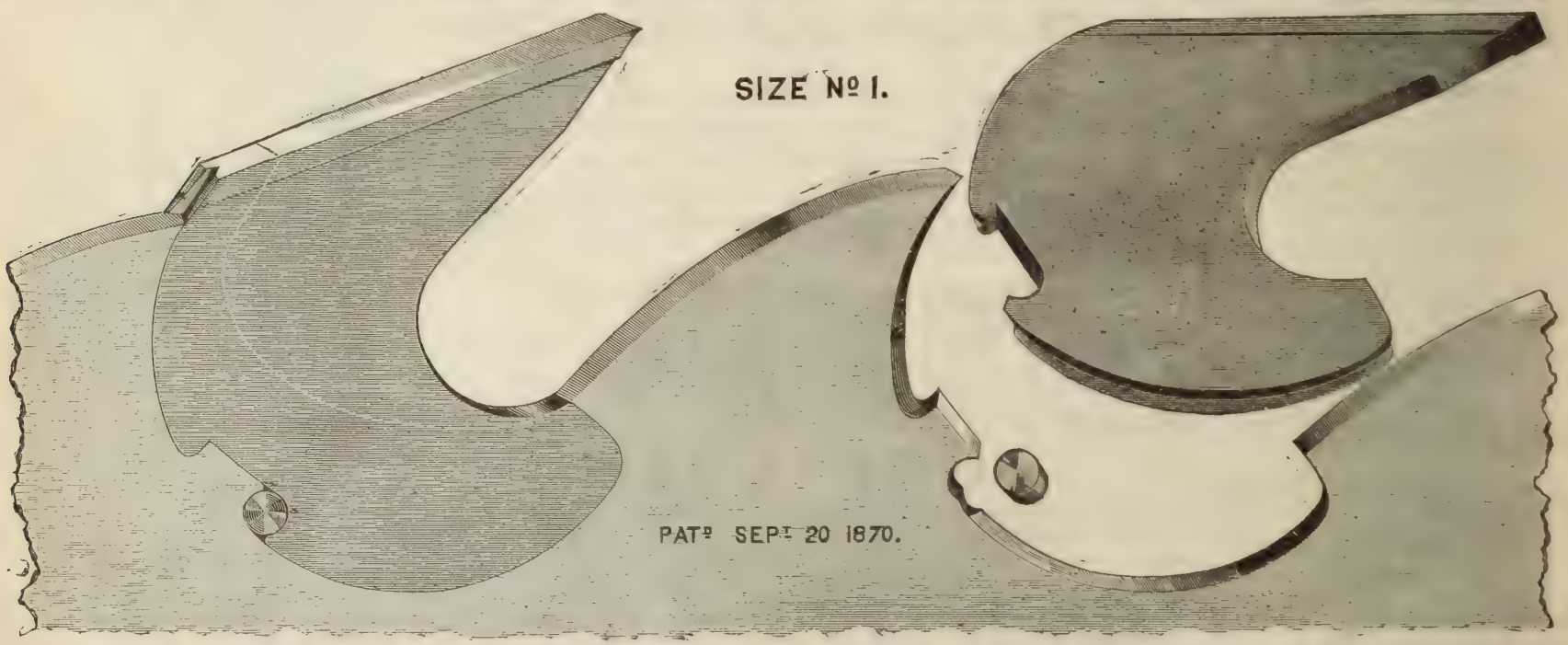
EXCLUSIVE MANUFACTURERS OF

THE "BROOKE BIT" SAW



AND

THE "TRENTON TOOTH" SAW.



The BROOKE BIT will cut more and better Lumber at Less Cost than any other Tooth. The TRENTON TOOTH is Warranted to stand in frozen timber. The BROOKE BIT and the TRENTON TOOTH fit in the same socket, enabling the Sawer to use either Tooth.

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THE CANADA LUMBERMAN

AND MILLERS' MANUFACTURERS AND MINERS GAZETTE.

PUBLISHED SEMI-MONTHLY.

The only Newspaper devoted to the Lumber and Timber Industries published in Canada.

SUBSCRIPTION $2.00 PER ANNUM

VOL. 1. PETERBOROUGH, ONT., MAY 16, 1881. NO. 14.

FORESTRY AND ABORICULTURE.

BEING THE FOURTH CHAPTER OF THE REPORT OF THE ONTARIO AGRICULTURAL COMMISSION.

Replanting and Ornamenting Farms.

The method to be pursued by the intending tree-planter, as well as his outlay, will depend much both on the particular object he has in view and the money he has to spend.

"I would recommend,' says Mr. Beadle, "for forest planting, the hard maple, particularly as a tree which will be very valuable yet in our country. I am not particularly partial to the silver-leaved maple, though it is a most popular tree with most planters because it grows so rapidly. The hard maple is a more symmetrical tree, and the foliage is very clean and free from insect depredations."

In Kent, the Commissioners noticed that the maple had been very extensively planted on the field sides and concession lines, a circumstance that was the more remarkable from the fact that the original wood of the district had largely consisted of the elm.

Mr. Cochrane, of Kilsyth, County of Grey, says in his evidence :—

"I think in the matter of tree-planting we are in advance of the rest of the county. The planting by the road-side and along lanes is becoming quite general. The neighbor who lives adjoining my place has planted out, I dare say, 1,000 shade trees. The trees planted by him were chiefly silver maple and rock maple. The first he planted was ten years ago, and they were planted fourteen feet apart. They now meet."

Mr. Beadle says on this point :—

"For forest planting I would recommend maple, taking of course into account the variety of soil. The hard maple does not succeed in all soils, but where it does succeed I prefer it. It flourishes in a dry soil. In wet soil I would use the soft maple. Some little blocks of forest have been planted with maple trees, with a view to their sugar-producing qualities, and some of these have attained a diameter of six or eight inches and a height of thirty or forty feet. They have been planted some years. I do not think they received any cultivation after planting."

The cultivation of the black walnut in universally recommended. Mr. Leslie says :—

"In the nut trees, the black walnut grows very rapidly in its younger stages—almost as rapidly as the English ash, and, at fifteen years, the wood could be used for many purposes, particularly for cabinet-making. I think the black walnut would have to be confined chiefly to the front of the Province. I never saw it east of Cornwall, but the south-west portion of the peninsula is its home."

That the walnut is not a tree requiring an exceptionally mild climate is proved by the experience of Mr. Beall, at Lindsay. Mr. Roy too, at Owen Sound, says :—

"There is an idea that black walnut will not grow as far north as Owen Sound. Ten years ago I planted black walnut seeds, and at the present time two or three of the trees bear nuts. They are not only ornamental, but coming to be very useful trees. The diameter of two or three of them now will be as much as six inches. They were planted in a strong soil."

If the soil is at all good, Mr. Arnold recommends the planting of the black walnut on lands that may, for any other reason, be unavailable for agricultural purposes.

The butternut, as already noticed, is recommended by Mr. Leslie for planting. Senator Allan says of it:—"The butternut, if transplanted young, succeeds well."

It is somewhat more hardy than the walnut, and, as previously mentioned, is often used as a substitute for that wood.

The hickory is rather a slow grower, but can be used profitably at so early a stage in its existence that it is a profitable tree to plant pretty freely with the view to the sale of thinnings as the trees mature and crowd one another. Mr. Beadle says :—

"I have not the slightest doubt that plantations of hickory will pay in the near future."

The ash can be easily transplanted, and, as a fast growing tree, for the wood of which the demand is certain to increase with time, is one that should be cultivated. Mr. Beadle says of it :—

"The ash will always be valuable, particularly the white ash."

Mr. Leslie recommends the English ash as preferable to some Canadian varieties. He says :—

"For tree planting on waste lands, or hillsides, with an economical view, I would recommend the English ash as a most useful tree. I think it would come into the market earlier than any other tree that could be planted. It is largely used for handle-making, and about ten years' growth on ordinary soil would produce a tree that could be split into four pieces, each of sufficient size to make a handle. The English ash is not the same as our common black ash ; there is as much difference as between the European larch and our tamarack. It is a more rapid grower than the black ash, and the wood is better in every way."

Of the coniferous trees none is more beautiful, and none can be planted of a more certain economical value, than the native white pine. Mr. Beadle says of this tree :—

"I believe that plantations of white pine will eventually pay when our timber regions to the north become used up or burnt up. The white pine grows rapidly."

Mr. Dempsey says of it :—

"Pine makes rapid second growth in sections of the country where it flourishes."

Mr. Beall says of this tree :—

"We should not forget our native pine, for there is no more beautiful tree we can have, if taken from the woods when very young."

Where, however, it is desired to plant in uncultivable ground, few, if any, trees will be found of greater value than the European larch. Mr. Leslie, speaking of this tree, says :—

"I do not approve of our Canadian tamarack at all. The timber is poor, and if people desire to go to the expense of planting for timber, I would recommend them to plant the European larch, which is a splendid tree, a rapid grower, and will grow in any part of this country. It is not an evergreen, but it throws out a great number of small branches which are a great protection. It is a very rapid growing tree, even more rapid than the Norway spruce, growing more than four feet on an average every year, unless the ground is very poor, in which case of course the growth will be less. In five or six years the tree will be twenty-five or thirty feet high.'

After mentioning it as an ornamental tree for lawn planting, Mr. Leslie says further :—

"The European larch would also be suitable for this purpose (handle-making.) The latter makes the best railway ties of any wood in the world, as it is almost indestructible. It is a very rapid grower, and in ten or twelve years' time the wood is of merchantable proportions, and useful for many purposes. Of course it would not be fit for railway ties by that time, but suitable for manufacturing purposes.

"It would be decidedly pfofitable to railway companies, as well as beneficial to the country, if the waste lands connected with their lines were planted with European larch. From this source they could in time obtain an almost inexhaustible supply of railway ties, much superior to the kind now in general use.

"Another use to which the European larch can be put is the production of ' ships' knees,' as it can be trained when young to the desired bend."

It was the European larch with which successive Dukes of Athol carried out their extensive tree-planting operations in Scotland, extending at last to an area of 10,000 acres, and involving the planting of no less than 14,000,000 tress.

Mr. Roy, of Owen Sound, says of this tree :—

"I have tried the European larch, which is much more pendulous [than the pines]. I have had no difficulty in establishing it here. It is a most beautiful and ornamental tree. I obtained it from Scotland."

The larch is not an evergreen, but, when planted in groves or belts, several trees deep, offers, from its conformation, a very considerable resistance to the winds.

For a perfect thelter-belt for orchard or fields, however, nothing is more strongly recommended than the Norway spruce. Mr. Leslie says of it :—

"We consider the Norway spruce the most valuable tree there is for planting in shelter-belts. It is extremely hardy, very rapid in growth, and easily transplanted." He adds, "I prefer the Norway spruce wholly to deciduous trees and evergreens mixed, as in the latter case, the one checks the growth of the other."

But there are many native varieties of spruce, which, if not in every respect so desirable, are near at hand, and can be made to do duty very efficiently. Mr. Beall says :—

"By spruce I mean the kind that is called the Canadian or black spruce. It varies much in colour. I bought a thousand plants of Canadian spruce a few years ago. I consider it superior to the Norway spruce, because it is equally as pretty in shape and it has a better color. With the Canadian spruce we get almost every variety of shade, but the Norway is all one shade. I suppose the different shades are all of the one variety, but they differ during their life. They can be cultivated successfully in rows, with the branches interlocking in the way described by Mr. Beadle. I have a fine close-cut spruce hedge about five feet high, pyramidal in shape, and five feet across at the base. It can be pruned beautifully, and we have now every shade and color, from the palest yellow to the deepest green. It does not grow so fast in the open ground as the Norway spruce, though I have trees, planted twelve years ago, off of which I cut the tops five years ago, and they are now eighteen or twenty feet high. I do not know how the Canadian spruce compares with the Norway spruce in merchant able value. It will grow almost anywhere. I would plant it along with cedar or pine on hillsides or rocky places."

Of the Canadian white and black spruce, Mr. Leslie says :—

"We have found the white spruce, a native of this country, a most excellent tree for shelter belts, but it is not so rapid a grower as the Norway, and for that reason the latter is superior. We have a black spruce, but it is not a good variety, as it is apt to become poor at the bottom ; that is, in the early stages of the growth of the tree the lower limbs decay and are lost, while the white spruce and the Norway hold their foliage to the ground. When I speak of shelter, I mean shelter for farm buildings, orchards, etc."

A Mistake.

It is a great and often fatal mistake to take repeated drastic purgatives for constipation of the bowels, they induce piles and cause debility of the bowels. Burdock Blood Bitters is a safe and perfect regulator of the bowels, arousing the torpid Liver and all the secretions to a healthy action ; acting on the Kidneys, and renovating and toning the system in a most perfect manner.

LUMBERMEN'S BOARD OF TRADE.

We find in the Stillwater, Minn., *Lumberman* the following report, which we republish as showing the style in which the lumbermen work on the other side of the boundary and the extent to which they co-operate for their joint benefit :—

At the adjourned annual meeting yesterday, the treasurer's report was read, as follows :—Balance on hand, $356.19 ; received on assessments, $1,477.21 ; received of Walker, Judd & Veazie on account of scaling by river police, $76.54 ; received from agent of the board, $18,673.12. Disbursements : Paid orders of agent, $18,222.53 ; river improvements, $937.84 ; river police, $574.35 ; treasurer's salary, $225 ; miscellaneous expenses, $298.85. Balance in treasury, $325.49.

The Boom Company was requested to advertise for bids on all prize logs passing the boom this season.

John O'Brien was made a committee to report condition of booms above lower boom.

Officers were elected as follows :—W. G. Bronson, president ; Samuel Matthews, vice-president ; John S. Proctor, secretary and agent ; E. L. Hospes, treasurer. Directors—E. S. Brown, Samuel Judd, Smith Ellison, Albert Tozer, James Mulvey and David Bronson.

The directors elected Charles Murray to have charge of the river police, and authorized the employment of such assistance as may prove necessary.

TREES IN CITIES.

An interesting paper has been recently read by Dr. Phene at Edinburgh on the benefits to be derived from planting trees in cities. Among the benefical results to be obtained are, he stated, the relief to the optic nerve through the eye resting on objects of a green color. Just that which is effected by the use of green or blue glasses in strengthening and sustaining the power of sight, is attained, or at any rate, much aided, by the presence of green in nature ; and in streets the only method to procure this result is by planting trees. It was pointed out by the author that whenever opportunity exists nature provides green and blue (the latter being the same color minus the presence of the yellow), and that as the absence of color produces snow blindness, and in tropical calms, where the ocean presents only a white reflected light from a uniform glassy surface, reduced optical power soon follows a long continuance of the absence of blue color, which becomes immediately apparent on motion of the waves. So in the streets, to the occupants of houses having a northern aspect, the glare of the reflected light is injurious ; but the effect would be much modified by the coolness to the eye produced by the green trees. In ancient surgery, persons having weak or declining sight were advised to look at the emerald. In the old style of building, the streets being narrow, were both cooler from the sun not being able to penetrate them with direct rays, and less subject to noxious exhalations from the scouring and purifying effect of the searching air to which the narrow streets were subject, so that while there was no space for trees, there was also less necessity. Wide treets, on the contrary, are hotter, and require the shade of trees to cool them ; and, as the case in London, which has so far done without trees in its streets, it was pointed out that not are modern streets compulsory wide, but that the enormous increase in metropolitan buildings render every sanitary question one of importance ; and the chemical properties of trees as shown by experiment give an important standing, irrespective of ornament or the pleasure they produce. Some of Dr. Phene's experiments on this subject have existed over a period of 30 years, and he it was first tried the planting of trees in the streets of London. Since the reading of a former paper by him at Manchester, where the importance of the subject was pointed out, a number of streets in wealthy localities have been planted, and even Trafalgar Square, n the heart of the metropolis.

Do not let prejudice stand in the way of relief if you suffer from any lingering disease. Burdock Blood Bitters cure others, why should it not benefit you ? If it is a specific for all forms of Blood, Liver, and Kidney complaints. Nervous Headaches, General Debility, Scrofula and all diseases of the Secretory system. ial Bottles 10 Cents.

PAPER PULP FROM WOOD.

The following is a description of the process of making wood pulp : The wood, four feet in length, and of any thickness, is brought in at the basement of the manufactory, placed in the barking jack (one stick at a time), where two men with draw knives rapidly peel off the bark. It is then conveyed by an elevator to the first floor, sawed in two foot lengths with crosscut saws, and passed on to the rip-saw, where it is slabbed (that is, a small portion of wood on opposite sides taken off), to permit it resting firmly in the grinding engine. It is then passed to the boring machine (an upright 1½ inch auger, with foot attachment, driven by power), where the knots are bored out. The wood is then placed in racks of the same size as the receptacle in the grinding engine, and carried out to be ground. The grinding engines are upright, and receive at a filling one-twentieth of a cord of wood. The wood is placed in a receptacle, and by a simple variable, automatic feed process, is pressed flatwise between two outward revolving rolls, composed of solid emery, which are flooded with a spray of water, carrying off the fibrilized pulp in a stream through revolving screens to the tank or stuff-chest in the basement. It is then pumped into a vat which forms part of the wet machine. In this vat is constantly revolving a large cylinder faced with fine brass wire-cloth, which picks up the particles of pulp out of the water and places them on the felt (an endless piece of woolen goods which makes between rolls, for different purposes, a continual circuit of the wet machine). On the cylinder is turned a heavy roll, called the "couch ;" between the two, where they meet, the cylinder leaves the pulp, with most of the water pressed from it. The pulp now makes its appearance on the felt above the concha roll in a beautiful sheet, 38 inches in width, and is carried along in a steady flow a distance of about 8 feet, where it passes between (the water here being pressed from it) but not beyond two heavy rollers, the upper one iron, the lower one wood ; it adheres to the upper roll, which is constantly turning, wrapping it up, and when a sufficient thickness is attained, is cut off by a knife being pressed to the roll, which is attached to the machine for that purpose. It now leaves the roll in a thick white sheet, 36x38 inches, where it is received by a boy in attendance on a table conveniently attached to the machine, and folded into a sheet 16x26 inches. It is then placed on scales until the weight is 100 pounds, when it is placed in a press and firmly tied into square, compact bundles. It is now ready for shipment to the paper mill.

Preservation of Lumber.

A correspondent writes as follows to the *Mill* :—"The question of the preservation of lumber from decay attracts considerable attention just now. It would be well, I think, for the Committee on Works to adopt the plan which has been well tried and is the least costly. The combination of lime with the other ingredients it is mixed with appears to be a ready method, and should take precedence of any other. The appearance of the streets at the present time suggests some other and more durable plan, especially the sidewalks and crossings, and it would be well to consider the most economical plan. The application of coal tar does not answer, as it necessitates the use of well-seasoned lumber, and is far more costly, inasmuch as inward decay sets in by the tar filling up the interstices of the wood, and forms a crust outside, preventing free ventilation. The lime admixture leaves the fibre clear, takes out the sap or fungi, and secures the material from all rot, either from sandy or clay soil.

A Wonderful Improvement.

THE CANADA LUMBERMAN.—This paper, formerly published in Toronto, has been purchased by Messrs. Toker & Co., of the Peterborough REVIEW, and will in future be published in the latter town. The first number under the new management is before us and shows a wonderful improvement in the paper. THE CANADA LUMBERMAN will be purely a non-political trade organ and will contain such valuable information as should render it indispensable to all interested in lumbering operations.—*Cobourg Sentinel-Star.*

CORRESPONDENTS.

All correspondence is of value to a paper, but it is often of more value to the man who writes it, or the town whence it is sent. When we are informed by a subscriber, as we often are, that he would not do without the *Lumberman* even if he had to pay $50 a year for it, we feel that the benefit of this great mass of imparted information is not so great to us as to others. There is plenty of matter relating to the lumber business with which to fill a larger paper than this one, but we want facts from practical men. Such matter is what makes any paper valuable. The effusions of a theorist are not worth the snap of a finger to anybody. A man who recently engaged in manufacturing said to us, "I read 'Grimshaw on Saws' from beginning to end, but a hard-handed, rough-looking old sawyer over in Michigan told me more about saws in twenty-five minutes than I could ever learn from the book."

We are frequently told by men that they do not feel competent to write for publication, but if they knew the true inwardness of every experienced newspaper man they would not make such an excuse. A newspaper wants news, and it welcomes it from any source. It is easier to find ten smooth writers than one good newsgatherer. Every man living in a lumber region knows something of the country, the amount of business done, prices, and the outlook. Information regarding any of these points, although expressed in words wrongly spelled and sentences wrongly constructed, is of worth. It is nothing to put matter in shape for publication —*Northwestern Lumberman.*

Lubrication of Bearings.

When a shaft bearing is at rest in its box, the oil is pressed out from under it ; either out of the box altogether, or upward to the space above the shaft, between shaft and box. No doubt the metal of the shaft then settles down to actual contact with the metal of box. In starting a lot of machinery into motion, the metal of the shaft must actually drag, for a short distance, in contact with the metal of the box, making the machinery hard to start. But as the bearings make part of a turn in their boxes, the oil adhering to the surface of shaft bearings is dragged in between the box and shaft underneath, thus floating the bearing upon a sea of oil. This sea is, however, not very broad or deep ; but there can be no doubt of flotation. As flotation takes place, the bearings rotate much more easily than when the metal drags in contact. This explains why starting friction is greater than friction of motion in machinery. When heavy pressures are brought to bear at the boxes, the oil is hindered from entering freely between the surfaces ; and if, at the same time, the two surfaces are not nearly parallel, there may possibly, or even probably, be metal contact at the prominences. The high resistance thus caused will produce heat at the rubbing parts ; which, by continuous motion, is sure to become excessive, resulting in destruction of lubricant, abrasion of metal surfaces, waste of power, etc.

Useful Hints.

The firm of Messrs. Oliver & Co., give some excellent practical advice to farmers. They say :—

"The kinds of hardwood lumber most in demand, either in the Dominion or for export, are walnut, cherry, butternut, chestnut, white ash, white oak, whitewood and basswood, all of which are now in good demand, as manufacturers are increasing their works and new ones are springing up in every part of the country. In the course of a few years these woods will become very scarce, and some of them will become entirely absorbed. This will cause the more common kinds, such as maple, birch, soft elm and black ash, to take their places.

"Our farmers, who own timber lands, cannot be too careful of them, and should use them with a sparing hand, for in the course of a few years their value will be largely increased.

"Our export trade is confined to the States and Great Britain, the former taking our sawn lumber and the latter being supplied in the shape of square timber."—*Ontario Agricultural Commission Report.*

THE OTTAWA VALLEY.

The *Citizen* of May 5th says :—According to present appearances there is every indication that the water in the Ottawa River will be unusually low this spring, much below the average height of ordinary years. In addition to the fact that the depth of the snow in the lumbering regions was much below the average during the past winter, the early thaws have melted away nearly all that was on the ground, and the water thereby formed has nearly all ran off. In thick swamps, however, there still remains some snow and ice, although much less than usual. Consequently, unless we have heavy rains during the next two months, indications support the conclusion that the water in the Ottawa and its tributaries will be much below its ordinary height on the 15th of May, when the highest water generally appears. Low water will be a serious obstacle to getting out the large quantity of fine logs made during the past winter, which would be a great disadvantage to the trade, now that sawn lumber sells at such good prices. However, if lumbermen can manage to get their timber out of the small creeks into the main channel before the water begins to fall, they may succeed in bringing it to its destination.

New Rust Preventive.

A new method of protecting the surface of iron from rust has been brought forward by Mr. Ward, of London. The new "inoxidizing' process, as it is termed, consists in combining a silicate with the metal by the aid of heat. Cast or wrought iron objects are first coated, by painting or dipping, with a silicate glaze, which quickly dries, and the articles are then passed through a furnace, or rather oven. In this way the silicate composition is said to be fused and absorbed into the metal, which upon cooling is found to have assumed a dull black appearance. The coating is said to be so far homogeneous with the metal as to protect it from any change from long exposure to the atmosphere ; and at the same time the silicate is not liable to disintegrate or separate from the iron. The articles treated in this manner may be ornamented by combining the silicate wash with any vitrifiable colors. Thus smooth polished colored surfaces may be produced upon iron, which, while possessing features distinct from ordinary enameling, yet present superior and more durable results than those obtainable by ordinary painting and varnishing.

Changes in the Diameter of Trunks of Trees.

According to the *Gardener's Chronicle*, MM. Kraus and Kaiser have been making some researches, from which it appears that the trunks of trees undergo daily changes in diameter. From early morning to early afternoon there is a regular diminution till the minimum is reached, when the process is reversed and the maximum diameter attained at the time of twilight ; then again comes a diminution, to be succeeded by an increase about dawn—an increase more marked than that in the evening. The variations in diameter coincide, therefore, with those of the tension, but they are shown to be inverse to the temperature, the maximum of the one corresponding roughly to the minimum of the other, and so on.

Mountain Mahogany.

This wood is indigenous to Nevada, The trees do not grow large ; one with a trunk a foot in diameter is much above the average. When dry the wood is about as hard as boxwood, and of a very fine grain. It is of a rich red color and very heavy. When well seasoned it would be a fine material for the wood carver. In the early days it was used in making boxes for shafting, and in a few instances for shoes and dies in a quartz battery. Used as a fuel it creates intense heat, it burns with a blaze as long as ordinary wood would last, and is then found (almost unchanged in form) converted to a charcoal that lasts about twice as long as that of ordinary wood.

If you suffer from any chronic disease arising from Impure Blood, Sluggish Liver, disordered Kidneys or inactivity of the Bowels ; if your Nervous System is deliberated from whatever cause arising, do not despair, but procure a trial bottle of Burdock Blood Bitters ; it will only cost 10 cents. Large Bottles $1,00, For sale by all medicine dealers.

ARBOR DAY.

Nebraska has established a custom which every one of the Western States, and many which are not included in that category, would do well to follow. For a number of years it has annually set apart a special day, called Arbor day, which the inhabitants devote to planting trees. The custom has been from its first inauguration very generally observed, and the result is that the bleak, naked surface of this Prairie State has become diversified with myriad groves, which relieve the monotony of the landscape and refresh the eye with the beauties of woodland growth, while they form a barrier against the winds and are developing into valuable preserves of timber. At the same time, in the cities and towns, and about residences in in the country, ornamental trees of fine stature are affording the comforts of shade and the æsthetic pleasures of graceful form and handsome foliage. In fact Nebraska is being rapidly transformed from a treeless to a wooded country through the maintenance of its annual Arbor day.

Two Thousand Dollars.

The easiest, cheapest and best way to secure the above amount is to apply for membership in the Mutual Benefit Association of Rochester, N.Y. Pay Dr. S. B. Pollard, 56 Bay Street, one dollar for four medical examinations, he will send your application to the head office, if you are accepted as a member they will issue a certificate of membership, which, on payment of eight dollars, entitles you to full benefits as a member, should you die to-morrow, next day, next week, next month, or any time within three months, this Association will pay to your heirs, or assigns, the sum of two thousand dollars. At the expiration of the three months all you have to do is to pay your pro rata amount, which is from 20 to 75 cents on the death of some other member, who has done nothing worse than to die during the three months just past. By paying your assessments on deaths, you keep your certificate alive, and at the commencement of the second year you are assessed two dollars per thousand to keep up office expenses, etc., for the next year. No casier, surer or better schemes to carry two thousand dollars has ever been devised than the Mutual Benefit Associates, of Rochester, N.Y.

5-1-13

Should be in the Hands of all Interested.

THE CANADA LUMBERMAN.—This is the title of a 16-page semi-monthly newspaper, devoted to the Lumber and Timber Industries of Canada, the tenth number of which has just reached us. THE CANADA LUMBERMAN was first published in Toronto, by Mr. Alex. Begg, but has now come into the possession of Messrs. Toker & Co., publishers of the Peterborough REVIEW, and like everything else sent out from that office, presents a very neat and tasty appearance. It is intended to be a purely trade organ, and entirely non-political. Special attention will be given to market reports, and the most trustworthy information possible will be obtained from each locality of the production of lumber and timber, and of the stock on hand. The number before us contains a large amount of useful information, and should be in the hands of every one interested in the lumber trade. Published by Messrs. Toker & Co., Peterboro', at $2.00 per annum.—*Trenton Trent Valley Advocate.*

A CORRESPONDENT writing from Beef Slough, the great sorting ground of the Chippewa river of Wisconsin, on the 26th of April, says the logs handled to date had been 3,500,000 feet, consisting of "pick-ups" or logs that had been hauled in off the bottoms. Last year the amount hauled was 200,000,000 feet, and it is not expected that more than that amount will be handled this season, though more logs have been put in on the stream. At the date of writing logs were coming into the boom at the rate of 2,000,000 feet a day, with a slow current. There is a lack of storage room at the works, but it is believed this will be obviated in a great measure by the large addition to the fleet of tow boats, so that logs can go out about as fast as they are rafted. There are about 400 men employed on the boom.

THE MISSISSIPPI.

Regarding the situation on the Mississippi river the Minneapolis *Lumberman* says:—The floods in the river during the last week have amounted to an embargo on commerce of every description in the west, especially in lumber. It is hard to tell just where so much lumber has gone to as the reported shipments of last week indicate sold. From the upper Missouri through to Chicago and down to Cairo the railroads have been damaged and suspended, while all reporting points show an advance upon last years' business. But for the week handling lumber on the Mississippi is almost impossible and only such lumber as is regarded unsafe is being moved and none sold. Great damage has been done already to lumber yards along the river as well as mills, booms, etc., by the floods. These things are adding to the cost of lumber this year and also reducing slightly the amount to be cut, both of which strengthen the market. From reports it is thought that nearly all the lumber held on the Missouri river will be lost and several million on the Mississippi, beside the large quantity of logs which have and being carried away.

Adventure in the Cave of Cacahuamilpa.

A serious but fortunately not fatal termination came to a recent excursion from the City of Mexico to the Cave of Cacahuamilpa, in honour of some American visitors. About fifty persons left Mexico, but the party received so many accessions by the way that when the cave was reached there were as many as 500 persons in the company, including the military guard.

It appears that Senor Carlos Quaglia, Governor of Morelos, had ordered a banquet to be prepared in that portion of the grotto which bears the name of "The Organ Salson," on account of the stalactites which have there assumed the form of an organ. The place was illuminated by electric lights, yet there were also many torches of resinous wood burning. The *elite*, who numbered perhaps ninety persons (there were also a great many servants), occupied the Organ Salon. In close proximity were placed several shelter tents for the ladies and children to sleep in. These were filled with sleepers, and along one side of the banqueting hall many gentlemen were lying on mattresses, mats, or blankets. A few of the more animated guests lingered over the table until two o'clock in the morning, and were chatting, when Governor Quaglia fainted. All efforts to restore him to consciousness seemed futile. While he remained in this condition some ladies complained of illness, others were asphyxiated, and a gentleman suggested that all this might be due to mephitic axhalations. Mothers at once hastened to their children, and, finding some in a stupor, comprehended the danger. A panic ensued. General Diaz ordered an instant retreat from the grotto. General Ord and others instructed the soldiers to carry out the ladies and children. Ex-Governor Romero Vargas aided Senor Marical, Minister of Foreign Relations, to scramble over the rocks. In fact, all who had strength assisted those who were asphyxiated, and every person was removed to a purer atmosphere. Some persevered until they reached the entrance of the cave (three miles distant) and threw themselves down on the bare ground, almost exhausted with fatigue, but safe.

Wild Cherry Wood.

Wild cherry is a wood for which a large demand has sprung up in the United States. In supplying the place of walnut, cherry is very valuable, and care should be taken of the growing trees. It is used extensively in making ebonized furniture. It has a very close grain, takes the best stain, and is capable of high polish. Cherry is also used in the internal fittings of cars and buildings. It is common in Michigan and other States, and is probably as enduring as walnut.—*Lumber World.*

CHEBOYGAN *Democrat*: The Pine river bridge at St. Martin's bay was carried away by the flood and 600,000 feet of logs came down into the lake. The logs were the property of the Mackinac Lumber Company, and their tug, the *Saugatuck*, is now engaged in picking them up, and all will probably be saved.

SALE OF TIMBER LIMITS.

An extensive sale of timber limits took place at the Russell House on Thursday afternoon, May 5th. They were what is known as the Cook & Waddell limits on the Kippewa. Mr. I. B. Tackaberry was the auctioneer. There was a good attendance of lumbermen, and bidding was quite active. The following were the sales effected:—

No. 1 limit—68 square miles, to Mr. S. S. Cook, for $88,400, being $1,300 per square mile.

No. 2 limit—50 square miles, $40,000, knocked down to Mr. J. T. Lambert for Gilmour & Co., being at the rate of $800 per mile.

No. 3 limit—50 square miles, $650 per mile, $32,500; Mr. Lambert for Gilmour & Co.

No. 4 limit—38 square miles, bought by E. B. Eddy at $170 a mile, $6,460.

The total receipts of the sale, therefore, amounted to $167,360 for the 206 square miles of limits. This is one of the largest sales in amount ever effected in Ottawa, at public auction.—*Ottawa Free Press.*

Brother Gardner on Labor and Capital.

The Lime-Kiln Club is a facetious creation of the Detroit *Free Press*, and the reports of the imaginary meetings of the club, under the imaginary presidency of Brother Gardner, furnish the readers of the *Press* with perennial supplies of wit. The following is a specimen:

The Secretary read the following:—

"CHICAGO, March 30, '81.—*Bro. Gardner*—Please inform your friends whether you sympathize with capital or labor, and oblige a

"WORKINGMAN."

"In the fust place, dar' am no call for me to sympathize with either," replied the old man in answer. "One am jist as necessary to the odder as two wheels to a wagun. Capital cl'ars away a spot an' builds a factory an' gins fifty or a hundred men a chance to airn a fa'r support fur demselves an' families. Dat factory wouldn't be dar' 'cept fur capital, an its wheels can't move without labor. If dis' workin' man wanted to draw me out on the question of strikes I has on a word to say. I believe dat the average employer pays his help a f'ar price an' all he kin afford to. I b'lieve he knows his business, an' am mo' competent to run it dan de men who labor fur him. If I can't work fur a man fur de price he offers I stan' aside. If I hire a man I pay him de goin' price, an' I doan' let him tell me dat I mus' do thus an' so. Men strike bekase dey can't dictate, but the same men wouldn't be willin' that deir employers should dictate to dem how much rent to pay, what close to buy, and how to spen' deir wages. As I soid befo' dar am no call fur smypathy in de case. De mo' strikes we have de less money will be put into manufactures. When a capitalist kin loan his money at good interest he am foolish to put it into a factory whar' demagogues kin haris an' ruin him. Jist you remember what I'm talkin'. De mo' unions de less factories. De mo' strikes de less work. Do you fink I'm foolish 'nuff to take my $800 out'n de bank, whar' principal an' interest am safe as a rock, an' put it into a coopershop, whar' three workmen could sink de hull of it in one strike bekase I couldn't pay mo' fur making de barl's dan the same would sell fur? Shoo! Fings am comin' to a putty pass when de man wid a shovel on his shoulder kin boss de man whose factory turned out that identical toole!"

A Compendium of News.

THE CANADA LUMBERMAN.—We have received No. 10, of THE CANADA LUMBERMAN, formerly published by a firm in Toronto, but now edited and published by Toker & Co., of the Peterborough REVIEW. Whatever this publication may have been previous to its transfer, the number before us is certainly a credit to its present publishers, in typographical appearance, in the description, quantity and quality of its reading matter, and get-up generally, and furnishes a compendium of lumbering and commercial news of the utmost importance to lumbermen and commercial men generally. We congratulate the publishers upon their enterprise, and sincerely hope that the LUMBERMAN may prove prosperous and profitable in their hands.—*Norwood Register.*

Wanted.

A SECOND HAND DOUBLE EDGER; also a LATH MACHINE, both in good repair. Reply stating lowest cash terms or particulars to Box 1002, Peterborough. b10

For Sale.

A 40 INCH LEFFELL WHEEL and COMPLETE CIRCULAR RIG, all in good order, suit[able] foot head. Apply to Box 1002, Peterborough.

Reid & Co.,

WHOLESALE LUMBER DEALERS. Lumber, shingles, &c. Car lots to suit customers. Highest Cash price in the market at from $6 to $7 per M.

OFFICE ON DOCK.—Esplande, foot of Shelbourne Street, Toronto. b15

Hardwood Timber Land

FOR SALE.

FOR SALE, 1200 ACRES HARDWOOD TIMBER LAND near Nipissing Railway, Coboconk. Easy terms. OSHAWA CABINET CO., Oshawa. b15

Situation Wanted.

A Book-keeper of first-class experience [desires] ation with a lumber firm. An opportunity [to] knowledge of the lumber trade more of an [object] the amount of salary. Unexceptional [references] as to character and ability.

b15 Apply to the Editor of THE CANADA LUMBERMAN.

The Stewart House,

Headquarters of Lumbermen in Peterborough, corner of Hunter and Water Streets. Good accommodation. Terms, $1 per day. Free 'bus at trains.

b15 T. CAVANAGH, Proprietor.

Allandale Junction Hotel

Travellers by Northern Railway have 15 to 20 minutes by all trains, for refreshments. Solid meals. Tea and coffee at counter. Fine brands of Liquors and choice Cigars. b17 E. S. MEEKING, Proprietor.

Orillia House,

ORILLIA.

New and Commodious Brick Building; best north of Toronto; splendid sample rooms; centrally located: free 'bus. b20 JOHN KELLY, Proprietor.

The Queen's Hotel,

TORONTO, CANADA.

McGAW & WINNETT, Proprietors. Patronized by Royalty and the best families. Prices graduated according to room. b20

St. Lawrence Hall,

PORT HOPE.

Is noted for its superior home-like comforts—a well kept table, equalling the best hotels in Toronto, and large, well-furnished rooms. Good sample rooms on ground flour. Walton Street, Port Hope.

b26 WM. MACKIE, Proprietor.

St. Louis Hotel.

THE RUSSELL HOTEL CO., Proprietors.

WILLIS RUSSELL, Pres., Quebec.

This hotel, which is unrivalled for size, style and locality in Quebec, is open throughout the year for pleasure and business travel. b18

Queen's Hotel,

BRACEBRIDGE.

JOHN HIGGINS, Proprietor. The proprietor (late of Georgetown,) having lately purchased the above hotel,) will endeavor to make it one of the best houses in the District of Muskoka. Tourists and hunting parties will receive every possible attention. Free 'bus to and from steamboat wharf. Terms, $1 per day. b20

The American Hotel,

BARRIE, ONT.

Collier Street, Adjoining the Market.

RATES REASONABLE, CENTRAL LOCATION, FREE BUS TO AND FROM ALL TRAINS.

☞ Every accommodation for Commercial and LUMBERMEN.

L14 W. D. McDONALD, Proprietor.

Fraser's Hotel,

GRAVENHURST, ONT.

HENRY FRASER, proprietor, (successor to Dougland Brown.) Mr. Fraser having purchased and thoroughly renovated and refitted that old established hotel, so long and popularly kept and owned by Dougland Brown, in the Village of Gravenhurst, is now in a position to attend to the wants of the travelling and general public. Parties *en route* to the Muskoka District, will find "Fraser's" a comfortable stopping place. The Bar and Larder are well furnished. Convenient Sample Rooms for Commercial Men. Good stabling and attentive hostler. Free 'bus to and from trains and steamboats. b26

PILING LUMBER AT THE MILLS.

It is now some four or five years since the *Lumberman* first called the attention of the mill men cutting lumber for this market to the advantage of piling and drying their lumber at the point of production, over the plan then almost exclusively in vogue of shipping it to this city green and seasoning it in the yards. In that time, the methods of making and handling lumber have undergone marked changes; the facilities for sawing have improved, and the average annual output of the mills in what is known as the Chicago district has very largely increased. The process of lumber making is in hardly any respect exactly what it was in 1877, and, similarly, we find that in handling the mill product, improvements have been introduced that have materially lessened the expense and added to the profits of manufacturers. A good many mill men have followed the advice of this paper, and have made a practical test of the plan of piling at the mills, and shipping the lumber to Chicago dry. The fact that none of them have found the scheme impracticable or have abandoned it after a fair trial, is pretty reliable evidence that it had in it, in the first place, nothing that was wild or visionary. Some figures printed in connection with our Annual Review of the production in this district last year give a pretty good notion of the increase in mill piling in the last four years. Comparisons of the amount carried over at the close of 1880 and 1877, with the amount sawed by the mills in those years, prove that while the increase in the cut for last year over the earlier one was less than 60 per cent., the gain in the quantity wintered over was fully 115 per cent., or nearly double. These figures demonstrate conclusively that the operators who have tried the plan of piling at the mills have found it profitable, and have continued to follow it.

The *Lumberman's* attention has been directed to this matter by the fact that several of the largest manufacturers who own yards in Chicago have lately been maturing plans to pile a considerable part of their cut at the mills, instead of occupying so much yard room here. The advance in dock rents is so great that it is becoming an important matter for the lumbermen to take up as little space in this city as they can, and, as a means of escaping a portion of this tax on their stock, a number of them are preparing to pile and dry at the mills. We are informed that several of the Menominee river operators are already making preparations to pile a large part of this season's product on the mill docks, with the intention of holding a good deal of it over for shipment early in the spring, when dry lumber is wanted and is generally scarce. They expect in this way to escape the necessity of enlarging their facilities here, which, with dock rents at $9.50 per foot, is an important consideration. The example of these operators is likely to be followed by others who have the accommodations at their mills for piling, and probably the close of the present season will find on the mill docks the largest stock that has ever been carried over.

It would seem that the advantages of cross-piling at the place of sawing hardly needs consideration at this time. They are pretty generally understood and admitted by saw mill men. For manufacturers who do not own yards at this point, the plan seems especially desirable. By adopting it they will escape many of the annoyances and losses that arise from the shipment of the lumber just as it comes from the saw, and its sale on commission here, by reason of which allowances have often to be made to the buyer which might have been avoided if the manufacturer could have sold his lumber in pile where the purchaser could see exactly what he was buying. A man can always sell his own lumber, moreover, to better advantage than some one else can sell it for him, which is another good reason why producers should, as far as possible, endeavor to hold their lumber at the mills and dispose of it themselves.

It is true, unquestionably, that the new plan, if it may so be called now, requires a larger and longer investment of money than the old one of turning the lumber into cash as soon after it leaves the saw as possible. In order to pile his cut, a mill man must be content to expend something in the way of interest, insurance, and, possibly, taxes; but the returns are sufficient to make this a paying investment. There is a nominal difference of fully $1 in the value of green and dry stock, and, actually, the difference is much more, for the fact that lumber is dry implies that it can be handled and freighted at a much less cost than if it were full of sap and water. There is something saved at nearly every point in its progress from the mill to the buyer's yard, and all this economy contributes to the profit of the man who dries it. Besides, if there were any doubt remaining as to the profit to be derived from seasoning lumber, it could not stand against the fact that lumber is bought and seasoned in Chicago where rents are high, taxes excessive, and labor much more costly in proportion than it is at producing points, and the process made to pay those who undertake it fairly, if not handsomely.

There is one other fact that should not be lost sight of in this connection; namely, that the manufacturer who piles his lumber occupies a comparatively independent position toward those who buy. He does not stand in mortal fear of a break in prices, or run the chance of sending a heavy consignment to the cargo market at the wrong time, and having to stand the consequent loss, because of the impossibility of doing anything with his lumber but selling it after he gets it there. If the market happens to weaken temporarily he need not suffer by it, unless he chooses to do so. He has his stock where it will keep, and he is prepared with the facilities for holding it; so that if prices are down to-day and there is reason to think they will improve shortly he can withhold his stock from sale long enough to cover the interval of weakness.

We shall be much disappointed if, as we said once before, there is not a considerable increase in the amount of piling at the mills this season, over what has been done in this way heretofore. Our reasons for so thinking are, first, that the plan is a thoroughly practicable and profitable one in itself, and one that is looked upon with favor by the shrewdest of our mill men, and, secondly, that the mill owners and operators are generally in better shape to take advantage of it than they ever were before. There is no doubt about the fact that they made money last year, and that they enter upon the present season with greater financial resources than they have ever had. They are therefore prepared, with few exceptions, to conduct their business just as they want to, and with a view to getting out of it all that it holds for them, and it is not to be assumed that they will overlook so important a source of profit as this. We do not hope to see all manufacturers cross-pile their lumber; we know very well that many of them cannot do it, because of inadequate dock facilities, or because of other obstacles in the way; but we are equally well aware of the faet that there are many others who do not labor under such disadvantages, and of such we look for a considerable proportion to try the plan of piling and drying their lumber at the mill.—*Nothwestern Lumberman.*

Spruce Deals.

There is no doubt but spruce deals are on the decline in the London market. The cargo of the St. Julien, from St. John, N.B. (which usually stands next in favor to Quebec), was sold a few weeks since at a decided fall in value. A cargo from the same port sold last year—about the latter part of March—fetched at the Baltic rooms on an average about £7 10s., now the highest price for the best lengths and sizes unsorted was £6 15s., and the average was in fact not more than £6 7s. 6d. all through. A couple of lots, about 3,000 pieces, 3x11 in., were knocked down at £6 5s., good lengths, varying from 18 to 25 feet. The freight charges would not be much short of £4 per standard, and if we deduct this and other expenses attached to these goods, we shall find very little left to go towards the first cost at St. John. Last fall spruce was in great request at the shipping ports, and for the best sorts at one time as much as £8 was paid. Shippers this season will think twice before consigning there again.

Yellow Oil is *par excellence* the remedy for Pain, Lameness, Rheumatism, Croup, Deafness, Burns, Frost Bites, Stiff Joints, and all flesh wounds. Any medicine dealer can furhish it.

TREE CULTURE.

Important as is tree culture with us, the subject is an insignificant one in the older Provinces compared with the position it assumes in the daily life in the North-West. Our prairies are not so bare of trees as are those farther south, and therefore the question has not the life-and-death importance it has in parts of Minnesota and Dakota. Yet if our pioneers are wise they will, after their first needs are satisfied, plant the seeds of trees in shelter belts over a space equal to several acres. The railroad company may properly be called upon to introduce to our territory the liberal policy in vogue in the North-Western States. A good rebate should be given on the price of all land that is put under trees, and young trees should be carried free of charge. To give an idea of the indispensableness of trees, we quote a few sentences from a letter by Mr. S. M. Emery, who, the St. Paul *Tribune* says, knows as much of the subject of North-Western tree culture as any man living. Mr. Emery says:—

"One-third of the money expended by the railroads in this State during the past ninety days in shovelling snow, saying nothing of loss of life, destruction of property, and the general loss in the shrinkage of revenue in freights, would plant sufficient wind-breaks on every rod of prairie storm-infested railroad in the State. Suppose the six lines of railroad crossing the State from east to west were protected by vigorous, strong-growing shelter-belts of cottonwood, white willow, or larch, and that these were supplemented by planting shelter-belts along all highways, and that the hundreds of timber-claims were covered with a vigorous growth of young timber, as required by law, could we fail in controlling the effects of these terrible blizzards? The intensity of the winds would certainly be modified, and a corresponding degree of comfort and safety be the result. This is not a matter of idle speculation, but it is susceptible of tangible, ample proof. In many places the shelter-belts along the line of the Manitoba Railroad are packed full to the topmost twigs, rendering great assistance in protecting the road-bed from the immense drifts, in spite of the fact that these belts have not had anything like reasonable care for several years."

Mr. Emery suggests that railroads which are subject to snow blockades should put a rod of land on each side of their line in trees.—*Globe.*

Which Way to Run the Splice of a Belt.

A new England journal is allowing the discussion of whether there is a wrong way to run a belt with regard to "splices." The general answer to this question is: Put the belt on so that the pully in slipping on the face of the belt shall run with and not against the spliecs. But if the belt slips on both pulleys, of a belted pair, then there can be no difference which way the splices of the belt lie, for the motion of one pulley will be against and the motion of the other will be with the splices, which is the true state of the case, but which does not often hapen; there will mostly be conditions favoring slippage on the one or other of the pulleys, when it is known which one it is, then put the belt on to suit this condition. In the cases where there is no slipping, if the driving pulley acts favorably on the splices, then the driven pulley is sure to be against them, and so it may be said there is really nothing in the advice directing the way a belt should be run, except for the cases of known slippage. So says Mr. John H. Cooper, who is certainly competent authority, in a recent communication.

Appreciated.

COTE ST. ANTOINE,
Montreal, May 4th, 1881.

MESSRS. TOKER & Co., Publishers of THE CANADA LUMBERMAN, Peterborough, Ont.

GENTLEMEN,—You, or some friend, has been forwarding me your periodical I think from its first issue, and you will please receive enclosed $2 to pay for it for the year, since I first received it, the date of which you will no doubt be able to ascertain. I like the paper very much. It is in my opinion the best published on the subject in America, and is far away ahead of the *Timber Trades Journal* of London, England.

Yours,
JAMES LITTLE.

FILING OR SHARPENING THE TEETH OF SAWS.

The greatest wear of a saw is on the under sides of the teeth. File nearly to an edge (but not quite), leaving a short bevel of, say 1-32 of an inch wide on the under side of the point. But in no instance file to a fine point and thin wire edge.

First.—Be sure that the saw hangs properly on the mandrel.

Second.—The saw must be in proper line with the carriage, and the carriage run true.

Third.—The mandrel must be level and run tight in the boxes.

Fourth.—Round off the saw so that all teeth will cut the same amount, and be sure that the very points of the teeth are widest.

Fifth.—Do nearly all the filing on the upper sides of the teeth and see that they are well spread at the points; file square and have them project alike on both sides of the saw.

Sixth.—If the saw heats in the centre when the mandrel runs cool in the boxes, cool it off and line it into the log a little.

Seventh.—If the saw heats on the rim and not in the centre, cool it off and line it out of the log a little.

Eighth.—Do not try the experiment of bending each alternate tooth for the set, when using inserted toothed saws.

Ninth.—File the teeth hooking, so that the swsge will spread them at the points.

Tenth.—Use a light hammer in swaging, say three-quarters to one pound weight.

In filing solid toothed circular saws, keep the throats or roots of the teeth round, or as the saws are when new. Angles, or square corners filed at the roots of the teeth, will almost invariably cause a saw to crack; the filing of such angles or square corners will cancel the warrant on any saw. The back or top of the tooth leads or guides the saw, and should be filed square across. The under side of the teeth may be filed a little beveled on the teeth of saws that are bent alternately for the set so as to leave the outer corners of the cutting edge longest. These directions, if carefully followed, will not only put the saw in excellent condition for cutting, but will, to a great extent, serve to keep it true in circumference, and even in balance. They have been prepared by J. E. Emerson, of Emerson, Smith & Co., who is, as our readers know, a practical saw maker.

LABOUR ON THE OTTAWA.

The Ottawa *Daily Citizen* in a review of the prospects of lumbering in that valley says:—The labor question in all of the lumberman's operations, is one of the greatest importance, and there seems no chance of a clash between labor and capital this season. Among the employers there seems a general idea that a slight advance in wages will take place, but no one of them seem to apprehend the slightest difficulty in obtaining all the hands they may require for any kind of work, and among the men so far, even those who are over sanguine as to what the season may produce, there seems no inclination to force the price of their toil above its fair market value. The Upper Ottawa Improvement Company, which owing to the fact that work is steady on it the whole season through, can get men cheaper than most private firms for the drive; are paying $3,000 per month more than they did last season. In the mills, however, it is not probable that much over a dollar a day will be paid for day hands, and the usual rules will be observed in regard to night hands. Men on the drives, especially the short drives, are now commanding high wages, in some cases $30 per month and found being paid, and in a very few exceptional cases first-class men on difficult work have secured a higher figure.

Fire Proof Buildings.

There if practically no such thing as a fire proof building. Brick comes nearer to being a fire proof material than any other substance. Iron is treacherous and almost worthless in many places where it is commonly used. A good oak pillar is far better as a support in case of fire than iron. None of the building stone generally in use is of any value in case of severe fire, amd granite is the worst, or least reliable of all.

THE RELATION OF FORESTS TO CLIMATE AND SOIL.

Mr. F. C. Zimmerman, who is connected with the United States Consulate at Berlin, in a late report to the state department at Washington, gives some valuable information upon this subject, which is becoming a very important one to the people of this country. He says that the influence of forests upon the climate and the fertility of the soil is most carefully studied at the forest academies and stations in Prussia, and the conclusions that are reached there can hardly fail to be of value to those in this country who are interested in tree growing. As warnings to wood destroyers, large tracts of land are pointed out in various countries which formerly were covered with forests within whose borders were springs and brooks, where now, man having thoughtlessly stripped the land of its trees, the eye looks in vain for a grass plot. The sunbeams unhindered strike the naked earth and raise the temperature of it and the neighboring air to a high degree; in the night, however, this heat is quickly and freely given out into space and the temperature suddenly sinks. Sufficient rain does not fall, nor does it fall regularly, but pours down in torrents and no good comes of it. The arid ground cannot retain the moisture, but from the dry surface, the fallen water evaporates like ether, and vegetation receives but little assistance in its effort to grow.

These students are now satisfied that the forest moderates the extremes of temperature and ameliorates the climate. It is especially worthy of note that the daily temperature of forests does not reach so high a point in summer as that of open fields, nor in winter does it sink so low. Changes of temperature do not occur so suddenly in the forest, for ground shaded by trees becomes warm more slowly than uncovered land, and does not cool off so quickly.

If one examines the statistics furnished by the Prussian meteorological stations, relative to the temperature of the surface of the earth and the neighboring atmosphere in their districts, it will be found that the rise and fall of the same are quite gradual, and that the extremes of temperature are reached somewhat later in the forests than in the open fields. This gradual rise and fall of temperature is one of the chief requisites for the proper growth of forest trees as well as for plants generally. Young trees are often injured by sudden changes of temperatue, and some species cannot thrive unless some protection from such changes is furnished them. The leaves of the trees retain a great deal of water, which is evaporated and thus given back to the air, the humidity of which is thereby increased, and the supply of moisture to the soil is rendered more equal and regular. That the soil receives is absorbed and evaporated very slowly. Much of the rain that falls upon open fields is wasted, the supply being often greater than the requirement for the time being. Forests, moreover, directly induce rain. The air within the forest becoming warm by the absorption of heat, both from the ground and the air next above it, leaves over the forest a current considerably colder than the neighboring air, and rain-clouds passing over are, in most cases, condensed by coming into contact with this colder atmosphere. To exercise such an influence, however, on atmospheric temperature, the forest must be of very considerable extent. Authorities on the subject of forest culture in Prussia are unanimous in the opinion that rainfall is more abundant and regular in districts well wooded than in bare lands. In this connection it is worthy of remark that the forests are generally rich in springs and brooks. This alone goes a great way toward showing the intimate relations between woods and water.

And further, while the forest tends to moderate climate, while it regulates the supply of moisture, the forest land is continually receiving a supply of the richest soil through the yearly fall of leaves. This soil increases the capacity of the ground for warmth, its moisture-retaining properties, and furnishes all the requirements necessary for the growth of plants. The important influence of forests on climate and the fertility of the soil having long been recognized, it has, therefore, often been attempted to forest lands sterile because of unfavorable conditions of climate. These attempts have often been crowned with success. The foresting of the Luneberg heath, a sandy plain near Hanover, was successful, though accomplished at great expense and in the face of various difficulties. In like manner the foresting of sandy stretches of land in Brandenberg and other Prussian provinces has resulted very favorably; the aim in all these cases being, of course, to counteract the influence that these sterile tracts exercised over the neighboring fertile soil and to convert them into useful and productive prossessions.

Again, referring to the fact that considerable moisture is necessary for the growth of trees, it is proper to remark that when it is deemed desirable to change the course of a stream or rivulet, in order to irrigate fields designed for cultivation, it should be carefully ascertained by noting the rainfall, remaining springs, brooks, etc., whether such a change can be made without detriment to such woodland in the neighborhood as may be in part dependent on such waters for moisture.

Draining too much of the water from forest lands destroys the forests, as deforesting often dries up streams. In Prussia this is so well understood and appreciated that before any such course is pursued, very careful consideration is given to the subject. and the forest officials are called upon for, and they submit, reasons *pro* and *con*. A few years ago, for instance, it was desired to reclaim certain bog land near Chorin, in Brandenberg, but in order to do so, it was found that it would be necessary to reduce the Paarsteiner lake a square mile or more. To this the forest authorities strenuously objected, because they feared that such a reduction of the water surface would so materially lessen the moisture of the air and soil, that the very existence of the neighboring forests would be hazarded. The project was therefore not carried out. This one instance shows how thoroughly the science of forest culture is appreciated in that kingdom.

The proper hygrometric and electric equilibrium for successful farming can only be maintained, it is estimated, when at least 20 per cent. of the total area is forest land. Mirabeau estimated, in 1750, that 32 per cent. of the land in France should be woodland. Reutzsch estimated that in the interior of Germany the proportion of woodland to the entire surface should be 23 per cent., while near the coast, where the air is supplied with humidity by evaporation from the sea, 20 per cent. would be sufficient and proper In this connection one writer very pertinently inquires: "If the German states require 23 per cent. midway between the North sea, the Baltic, and the Mediterranean, what is demanded for the great area between the Mississippi and the Rocky Mountains, almost without water from the Gulf of California to the Polar sea?"—*Northwestern Lumberman.*

To Harden and Temper a Saw.

Fix it by its hole to a bar or rod, as though it was an arbor. Heat evenly over a charcoal fire to a good cherry red. Dip it evenly in a horizontal—level—position into a bath of whale or lard oil, moving it horizontally until it is cool. Remove it, and with the oil on it heat it over the fire until the oil flashes or flits over the surface. Do not allow the oil to burn. In all cases the saw must be hardened horizontally not vertically. Experiment has proved this method to be a perfect success.

Steel Bands for Transmitting Power.

A patent recently granted in Vienna and Berlin uses bands of steel, tempered and hardened, to transmit motion from one pulley to the other, the faces of the pulleys being turned perfectly flat and then faced with a varnish of resin, shellac and asphalt. The fastenings of these belts are of a peculiar structure and can not properly be described without engravings.

Invaluable to the Trade.

THE CANADA LUMBERMAN.—This paper, which was formerly published in Toronto, will in future be published in Peterborough, Messrs. Toker & Co., of the REVIEW, having become the proprietors. The LUMBERMAN, being a purely trade organ, and devoted exclusively to the lumbering interests, will contain information such as will render in invaluable to those engaged in that business.—*Hastings Star.*

TARIFF OF RATES.

To be levied during the ensuing season (1881) by the Upper Ottawa Improvement Company, in connection with the undermentioned works:

I.—THROUGH DES JOACHIM BOOM.

	Tolls Per piece.	Working expenses Per piece.
Saw logs, 17 feet and under	½ cent	2 cents
Red and White Pine, Tamarac, Spruce and Hemlock, round or flatted, over 17 feet and under 25 feet long	4-9 ct.	2⅔ cts.
do do 25 to 35 feet long	5-9 ct.	3½ cts.
do do 35 feet and upwards in length	8-9 ct.	5½ cts.
Red and White Pine, Tamarac, Spruce and Hemlock, square	1⅓ ct.	8 cts.
Oak, Elm and other hardwood, square or flatted	2 cts.	12 cts.

II.—THROUGH FORT WILLIAM BOOM.

Saw logs, 17 feet and under	½ ct.	1 ct.
Red and White Pine, Tamarac, Spruce and Hemlock, round or flatted, over 17 feet and under 25 feet long	4-9 ct.	1⅓ ct.
do do 25 to 35 feet long	5-9 ct.	1⅔ ct.
do do 35 feet and upwards in length	8-9 ct.	2⅔ cts.
Red and White Pine, Tamarac, Spruce and Hemlock, square	1⅓ ct.	4 cts.
Oak, Elm and other hardwood, square or flatted	2 cts.	6 cts.

III.—THROUGH ALLUMETTE BOOM.

Same as No. II.

IV.—THROUGH MELONS CHENAL BOOM.

Saw logs, 17 feet and under	1-10 ct.	1 ct.
Red and White Pine, Tamarac, Spruce and Hemlock, round or flatted, over 17 feet and under 25 feet	2-15 ct.	1⅓ ct.
do do 25 to 35 feet long	1-6 ct.	1⅔ ct.
do do 35 feet and upwards in length	4-15 ct.	2⅔ cts.
Red aud White Pine, Tamarac, Spruce and Hemlock, square	2-5 ct.	4 cts.
Oak, Elm and other hardwood, square or flatted	3-5 ct.	6 cts.

V.—PASSING LAPASSE BOOM.

Tolls same as for No. IV. No charge for Working Expenses.

VI.—THROUGH IMPROVEMENTS IN MISSISSIPPI CHENAL, CHATS RAPIDS AND QUIO BOOM OR ANY ONE OF THEM.

Saw logs, 17 feet and under	¼ ct.	1½ ct.
Red and White Pine, Tamarac, Spruce and Hemlock, round or flatted, over 17 feet and under 25 feet long	4-9 ct.	2 cts.
do do 25 to 35 feet long	5-9 ct.	2½ cts.
do do 35 feet and upwards in length	8-9 ct.	4 cts.
Red and White Pine, Tamarac, Spruce and Hemlock, square	1⅓ ct.	6 cts.
Oak, Elm and other hardwood, square or flatted	2 cts.	9 cts.

VII.—THROUGH IMPROVEMENTS FROM DESCHENES TO HEAD OF HULL SLIDE, NORTH SIDE.

Saw logs, 17 feet and under	1 ct.	
Red and White Pine, Tamarac, Spruce and Hemlock, round or flatted, over 17 feet and under 25 feet long	1⅓ ct.	
do do 25 to 35 feet long	1⅔ ct.	
do do 35 feet and upwards in length	2⅔ cts.	
Red and White Pine, Tamarac, Spruce and Hemlock, square	4 cts.	
Oak, Elm and other hardwood, square or flatted	6 cts.	

VIII.—THROUGH IMPROVEMENTS IN THOMPSON'S BAY.

Saw logs, 17 feet and under	¾ ct.	1 ct.
Red and White Pine, Tamarac, Spruce and Hemlock, round or flatted, 17 feet and under 25 feet long	1 ct.	1⅓ ct.
do do 25 to 35 feet long	1⅓ ct.	1⅔ ct
do do 35 feet and upwards in length	2 cts.	2⅔ cts.
Red and White Pine, Tamarac, Spruce and Hemlock, square	3 cts.	4 cts.
Oak, Elm and other hardwood, square or flatted	4½ cts.	6 cts.

IX.—THROUGH IMPROVEMENTS IN LIMEKILN EDDY.

Saw logs, 17 feet and under	¼ ct.	
Red and White Pine, Tamarac, Spruce and Hemlock, round or flatted, over 17 feet and under 25 feet long	⅓ ct.	
do do 25 to 35 feet long	5-12 ct.	
do do 35 feet and upwards in length	⅔ ct.	
Red and White Pine, Tamarac, Spruce and Hemlock, square	1 ct.	
Oak, Elm and other hardwood, square or flatted	1½ ct.	

X.—THROUGH BOOM BELOW THE OUTLET OF HULL SLIDE

Same as No. IX.

Mothers who are startled at the hour of midnight by that ominous hoarse cough of your little ones, what would you not give for a prompt and certain means of relief from that dread destroyer of your children, Croup? Such a means you may have for the trifling cost of 25 cents. It is Hagyard's Yellow Oil, the great Household remedy for all inflammatory and painful diseases. Do not rest over night again without it.

FOREST FIRES.

Forest fires are numerous during this month and too stringent measures cannot be taken to prevent carelessness on the part of [illegible] and incendiarism by tramps. In New York such offences are criminal. Under the [illegible] statutes of that State, every person [illegible] setting fire to his own woods, or negligently suffering a fire kindled upon his own [illegible] fallow land to extend beyond his own land, is to be deemed guilty of a misdemeanour, and, on conviction, is liable to a fine not exceeding a thousand dollars or imprisonment for a term not exceeding one year. A peculiar rule also [illegible] to civil suits for damages occasioned by [illegible] fires in Suffold county. Wherever a person [illegible] has kindled a fire on his own land permits it to extend beyond, to the land of another, he is deemed to have done so negligently [illegible] law imposes upon him the burden of proving "beyond every doubt"—these are the words of the statute—"that there was no negligence on his part, and that the fire extended from his own land from causes entirely beyond his own control." These laws are found to have a wholesome effect.—*Mail.*

A Wood-Splitting Machine.

A novelty in mechanics is a wood-splitting machine, which E. W. Peck has used near Cambridgeburgh, Vt. It acts exactly upon the guillotine principle. An enormous axe, weighing with its fixtures, 200 pounds, runs up and down between two uprights, and is controlled by a pair of levers. As the section of a log drops from the buzz saw, it rolls down an incline to the splitter. Here a workman places it under the axe, which, descending, splits it with incredible ease and despatch. The toughest and knottiest "old settlers," which it would take a man half a week to split with an ordinary axe, are disposed of in a second. The rapidity with which it works may be imagined from the fact that it can split wood as fast as it can be sawed in a mill. It does as much work in a given time as twenty men could accomplish.

Timber Seasoning and Preserving.

A foreign exchange describes a method which it says has been utilized to a large extent in France. By this new process, the antiseptic properties of carbolic and other tar acids are carried through the heart ane the innermost pores of the largest log, all the free water and fermentable sap being extracted by superheated sted steam. It is said that all kinds of wood may be preserved. A noteworthy thing reported is, that the timber if first so softened by the process, under appropriate treatment, it may be pressed into various shapes, after which it hardens and resists the attacks of fungi or of insects. As licenses have been taken out in England, we hope for fuller information as to the process itself and it practical results.

Growth of Trees.

As the result of observation and from the testimony of reliable men, the following is about the average growth in twelve years of the leading desirable varieties of trees when planted in belts or groves and cultivated:—White maple, one foot in diameter and 30 feet high; ash-leaf maple or box elder, one foot in diameter and 20 feet high; white willow, one and a half feet in diameter and 40 feet high; yellow willow, one and a half feet in diameter and 35 feet high; Lombardy poplar, 10 inches in diameter and 40 feet high; blue and white ash, 10 inches in diameter and 25 feet high; black walnut and butternut, 10 inches in diameter and 20 ft. high.

Sharpening Old Files.

The edge produced on files by acid does not hold; a recut file differs from a new one in temper, as drawing and replacing the temper injures the steel, the original temper seldom being attained. The only method of sharpening a file and making it as good as new, is by the application of the sand blast. I have been using this in my shop about six months, and can sharpen an old file equal to new (without disturbing the temper) in from one to three minutes. I prefer old files thus treated to any new files, as it makes them keener and smoother cutting, and preventing breakage of teeth.—*W. A. Foster in Blacksmith and Wheelwright.*

Travelling Agent.

MR. A. L. W. BEGG has been appointed agent for the CANADA LUMBERMAN, and is authorized to collect subscriptions and grant receipts therefor and to make contracts for advertisements appearing in its columns.

The Canada Lumberman

DEVOTED TO THE LUMBER AND TIMBER INTERESTS OF THE DOMINION.

PUBLISHED SEMI-MONTHLY BY

TOKER & Co. PETERBOROUGH.

Terms of Subscription:

One copy, one year, in advance	$2 00
One copy, six months, in advance	1 00

Advertising Rates:

Per line, for one year	$0 90
Per line, for six months	50
Per line, for three months	30
Per line, for first insertion	10
Per line, for each subsequent insertion to 3 mo's.	05
Cards not occupying more than 12 lines (1 inch) per annum	8 00
Cards not occupying more than 12 lines (1 inch) for six months	5 00
Cards not occupying more than 6 lines per annum	5 00
Cards not occupying more than 6 lines, for 6 mo's	3 00

Special rates will be made for page, half page and column advertisements.

Advertisements intended for insertion in any particular issue should reach the office of publication at least three clear days before the day of publication, to insure insertion.

All communications, orders and remittances should be addressed and made payable to TOKER & Co., Peterborough, Ont.

Communications intended for insertion in the CANADA LUMBERMAN, must be accompanied by the name of the writer, not necessarily for publication, but as a guarantee of good faith. Communications to insure insertion (if accepted) in the following number, should be in the hands of the publishers a week before the date of the next issue.

PETERBOROUGH, Ont. MAY 16, 1881.

THE saw log drive belonging to Fowls Bros., Hastings, Ont., arrived at Lakefield on Wednesday morning, and that of J. Z. Rogers, of Ashburnham, at Youngs' Point.

MESSRS. R. & G. STRICKLAND are very busy cutting up about a million feet of basswood, ash, etc., at their Lakefield water mill, which has lately been thoroughly overhauled and is now doing better work than it ever did before. Too little attention has hitherto been paid to the getting out of hardwoods in this section of Ontario.

THE Tanite Company, of Stroudsburg, Monroe Co., Pa., compelled by the increased demand for their celebrated emery wheels and grinding machinery, are about enlarging their already extensive works. Plans and specifications were perfected for a building 24x64 feet, four storeys high. In consequence of the lateness of the season, however, it is impossible to get out the lumber in time. The original plans are therefore modified temporarily, and a building of two storeys, 24x32 feet, will be erected, which, at a later period, will be enlarged to the original designs.

As most of our readers know it is one thing to get out logs during the winter and another to get them to the mills in good time during the summer. In the last two or three issues of THE CANADA LUMBERMAN we have given various estimates of the expected supply of lumber for the season, but none of these estimates, so far as we are aware, made any allowance for the logs which, although banked, were either not likely to reach the mills this summer, or to reach them so late as to prevent the lumber manufactured from them being put upon the market until next spring. That more than the usual quantity of logs will be hung up this season is now more than probable. Not only is the opening of the streams unusually late, but little or no rain has fallen, to make up for the water which has been quietly slipping away without taking a log with it. Unless, therefore, unusual provision were made last fall for holding back a supply of water on the small streams, the probabilities are that the estimated supply for the current season will be considerably reduced from this cause, although we think it would be rather injudicious to make bets, as the *Lumberman's Gazette* says is being done in the west, that the supply of lumber will be from ten to fifteen per cent. less this season than it was last, on account of the dearth of water.

TIMBER ON ROAD ALLOWANCES.

In compliance with the request of a correspondent we publish the 3rd, 4th, 5th and 6th (as amended last session) sections of chap. 26 of the Revised Statutes of Ontario, which relate to the rights of license holders and municipalities to the timber growing upon road allowances included within the bounds of any license:

3. Every Government road allowance included in any Crown timber license, heretofore granted, or which may hereafter be granted under section one of this Act, shall be deemed and taken to be and to have been ungranted lands of the Crown, within the meaning of said section, and liable as such to be included in such license. 34 V. c. 19, s. 1.

4. The licensee or nominee named in any such license shall be deemed and taken to have, and to have had, all the rights in respect of every such road allowance, and the trees, timber and lumber thereon, or cut thereon, as were or, by the second section of this Act, may be conferred upon him in respect of any other Crown lands embraced in such license, and the trees, timber and lumber thereon, or cut thereon, except that he shall not be entitled to take or keep exclusive possession of any such road allowance. 34 V. c. 19, s. 2.

5. No by-law passed, or to be passed by any Municipal Council for preserving, selling, or otherwise appropriating or disposing of the timber or trees, or any part thereof, on any Government road allowance or allowances included in any such license, shall be deemed or taken to have had or have any force or effect against any such license. 34 V. c. 19, s. 3.

6. In case the council of any township organized as a separate municipality, or the council of any united townships, have passed or hereafter pass any by-law for preserving or selling the timber or trees on the Government road allowances within such townships or united townships, and included in any such license, the corporation of such township or united townships shall be entitled to be paid, out of the consolidated revenue fund of the Province, a sum equal to two per centum of the dues received by Her Majesty for or in respect of the timber or saw-logs which, during the existence of such by-law, were cut within the said township or united townships, under the authority of such license; but no corporation shall be entitled to such per centage of the dues received for timber or saw-logs cut during the times or seasons when any timber or trees on any such road allowances were cut or removed, for which cutting or removal such corporation had, before the fifteenth day of February, one thousand eight hundred and seventy-one, obtained a verdict against any such licensee or nominee.

With regard to the timber growing on road allowances not within the limit of any license, sub-section 4 of section 509 of the Municipal Act provides that "the Council of every county township, city, town, and incorporated village may pass by-laws for preserving or selling timber, trees, stone, sand or gravel on any allowance or appropriation for a public road" subject to the provisions which we have just quoted.

FOREST CULTURE.

The Toronto *World* is another paper that is sharing in the growing interest felt in forest preservation. In an editorial it says:—"The forests of Canada are, next to her farms, the chief source of her wealth. But these are being rapidly depleted, and scarcely a move has been made in any quarter to re-plant or conserve them. At the present rate of consumption our supply will become exhausted in fifteen years, while the supply of the United States east of the Rocky Mountains will not last ten years. Much may be done by judicious care and oversight to provide for future wants, as may be learnt from a study of forest culture in Great Britain and the countries of the continent, more especially Germany and France. This work ought to begin now; to wait ten years or five years would be to lose invaluable opportunities.

OUR FORESTS.

Our readers will be pleased to learn that the Council of the Agricultural and Arts Association of Ontario at its last meeting decided to offer two prizes of $30 and $20 for the best essays on "the best methods of preserving our forests and the varieties of trees best suited for planting," and that these essays are to be read and discussed at a public meeting of all who chose to attend, to be held on the evening of the first Wednesday during the Provincial Exhibition in London, next September. It is to be hoped that these prizes will not only be the means of calling forth some valuable information and suggestions with regard to this very important subject, but that the opportunity, which the public meeting is designed to afford, will be taken advantage of by many of the readers of THE CANADA LUMBERMAN, to place their views—particularly with regard to the preservation of our present timber supply—before the public. In connection with this subject may we not ask: Why should not the lumbermen of this Province form an association, and receive a grant from the Provincial Treasury to aid them in promoting so laudable an object as the preservation of our forests? The Provincial Government now give grants to several associations which have been formed for similar public purposes, and why not to the lumbermen, who represent an interest, second to that of the farmer, but of far greater importance than any other.

FOREST STATISTICS.

In the United States we learn that important branches of the census work have been committed to the charge of special agents, who are experts in their several departments. Among these Professor Charles S. Sargent has charge of the subjects of "Tree-covering, Forest Wealth, and the Lumbering Industry." This gentleman will no doubt collate the scattered statistics on these subjects, and publish them in such a shape as to give very valuable information. We might well follow the example of our neighbors in this respect, for the small expenditure incurred would be amply repaid, by our better knowledge of our forest areas and forest wealth. This is only one instance out of many of the interest which our neighbors south of the line are taking in their forests, in which respect we lay somewhat behind them.

HALIBURTON.

TIMBER.—A very large drive of square timber belonging to Messrs. Irwin & Boyd is running through this village. It will be rafted in Head Lake, where, with other timber which has already been brought up the lake, there will be some 2,000 pieces. This drive consists of 1,100, among which are some fine timber, the largest being 41 feet in length, and squaring 30x31 inches. A timber slide for loading it has been built near the new wharf, and the first train load left on the 6th *via* the Victoria and Midland railroads for Port Hope.

SCARCITY OF WATER.—The lumbermen are complaining very much of the want of water. A vast number of logs will have to be left in the small creeks, adjoining the large creeks and lakes, there not being sufficient water to run them out. There has not been any rain in this part since the first part of February. Water is lower than last fall.

Haliburton, May 9th, 1881.

Deserves Success.

THE CANADA LUMBERMAN.—Messrs. Toker & Co., the enterprising publishers of the Peterborough DAILY REVIEW, have purchased THE CANADA LUMBERMAN, and will henceforth publish it twice a month. It is the only paper published in Canada in the interest of lumbermen, and will, we are sure, guide and guard their interests faithfully and well. The LUMBERMAN is purely a trade organ, and will not be allied with any political party. We wish Messrs. Toker & Co. the success they deserve, and if they get that they will have no reason to grumble, as every person interested in lumber or timber should subscribe for THE CANADA LUMBERMAN at once.—*Stratford Herald.*

JAKE BOGART'S saw mills, Ufford, have again been overhauled and are in first-class order.

ST. JOHN, N.B.

THE FRESHET.—The water in the river continues very low for the season of the year, owing to the protracted dry and cold weather; the same may be said of the smaller streams, operating adversely to stream driving operations.

SAW MILLS.—Sawing has commenced at the greater number of our milling establishments, both in the city and in the country districts, but it is doubtful how long they can all be kept in operation unless we have more favorable weather for the streams soon.

Freights.—The rates of freight rule about the same as at the date of our last. A large business in chartering has been done however in the past fortnight, some 16,000 tons of shipping having been placed, chiefly for Liverpool and Bristol Channel, at 57/6.

SHIPMENTS.—The following shipments of deals and other sawn timber have been made during the two weeks past, say:

For Europe	6,029,000 Sup. ft.
" United States	2,227,000 "

St. John, N.B., May 5th, 1881.

OTTAWA.

SHIPPING.—Shipping of lumber is going on briskly by the river and by the St. Lawrence & Ottawa Railway, and by the Canada Central Railway.

RAFTING.—A. & P. White, of Deux Rivieres, have a large gang of men rafting their timber at that place and expect to be ready to start for Quebec at an early date. The water in the Ottawa and many of the other streams is very low, and great fears are entertained that there will be many logs left in the creeks this season.

DRIVING.—Bronson & Weston's drive is near out of the Schyon; the water is as high as it was any time at this season of the year. Fraser & McCanchan's drive on the same stream is also doing well. They expect to be in the Ottawa River about the 12th of May. The tug *Walter B.*, owned by Mr. Thibaudeau, is to begin towing logs from Des Joachim to Fort William on the 28th.

CLOSED.—Mr. J. A. Gouin has closed the Russell House until the 15th of June next. The old stone building is to be taken down and a handsome new front built. Mr. Gouin has conducted the Russell House for the past eighteen years, and as he has been a popular landlord, he will doubtless have the continued patronage of the travelling public when the superior accommodation which will be afforded by the contemplated improvements is completed.

BIG TREES.

Referring to big trees, the *American Register* tells us that a grove in California, consisting of 1,680, contains not one which measures less than six feet in diameter. A rare and magnificent white oak is to be seen in the Quaker burying ground in Salem, New York. It is more than two hundred years old, and is remarkable for its enormous branches, which have a spread of 112 feet. A remarkable chestnut tree is growing on a farm in Berks, Pennsylvania. It is nearly forty feet in circumference at the base, and the top of the tree can be reached by steps fastened between the limbs. Most remarkable of trees with a history is a russet apple tree in Skowhegan, Maine, which was planted in 1762. In its branches a play-room for children has been built for half a century. The tree is seven feet from the ground to the branches, five in number, all of which are very large, and average 30 feet in length, covering a space of ground 63 feet in diameter. It is more than 4½ feet in diameter, and has yielded an average of thirty bushels each year.

On the Subject of Wagon Tires.

The question has been asked why people persist in the use of narrow wagon tires where the roads are of clay and mud, or where loads have to be drawn over ploughed or mellow ground. A broad tire will not sink so far as a narrow one, consequently the narrower the tire the deeper the wheel will sink into the field or road, and greater power will be required to draw the load. While narrow wheels are desirable for vehicles for fast driving, it is very desirable that the breadth of tire used on our lumber and farm wagons should be materially increased.

Trade Notes.

THE schooner *J. Norris* gets $80 per 1,000 for timber from Amhurstburg to Kingston.

TRAFFIC on the Erie Canal is not expected to be fully open until about the 17th inst.

MR. ROBT. CAMP'S new steam saw mill at Dwight commenced cutting logs on the 14th ult. The machinery worked well.

THE Moira river is falling rapidly, making owners of logs on that stream apprehensive about getting them to the mills this year.

AN individual named Hitchman was fined $10 and costs, at Huntsville, for having stolen timber from the farm of the poet Churchill.

ALTHOUGH the rate on lumber from Toronto to Oswego is still quoted at $1.25, a charter, however, has been made at $1.15.

THE steamer *Conqueror*, of Quebec, has been chartered for towing timber on Lake Ontario. She has been guaranted eleven rafts.

THOMPSON & MCARTHUR, Fenelon Falls, are preparing to erect a large steam saw mill on the north side of the village, on the shore of Cameron Lake.

WE understand that the drives on Gull and Burnt Rivers are making good progress, and will soon be out of danger, but on the smaller streams drivers have their hands full.

THERE is a good opening for a planing mill and sash factory at Lakefield, Ont., as there is none within nine miles of that place, and it is surrounded by a good country.

THE Muskoka Slide Dam and Boom Company have about 220 men employed, to whom they are paying an average of $26 per month. Last year the average was $24.

FROM the St. Ignace *Republican* we learn that the Mackinac Lumber Co., put in during the past winter 14,000,000 feet of logs, held over from last year 3,000,000 feet and have 1,500,000 feet of lumber on their docks and expect to manufacture 16,000,000 feet this season.

FROM two groves of maples in North Harpersfield, Delaware County, New York, the yield this year has been seven tons of maple sugar. The groves contain 4,200 trees. In 1875 the town of Harpersfield produced 200,000 pounds of sugar, an amount which this year's crop is thought to exceed.

MESSRS. G. W. TAYLOR & Co., are putting in two gangs consisting of 64 saws in their saw mill, on Muskoka Bay, which will make its cutting capacity much greater than any mill in the Muskoka district. They are also building two additions to their mill, one for lumber and the other for lath.

ON the 30th ult., while superintending the breaking of a vast dump of logs on the Tequin river, Mr. Joseph Calverlie got entangled among the falling logs, and as a result, a few broken ribs, an ugly contused wound on the right temple, and a general bruising all over, from which, however, nothing serious is apprehended.

DURING the past 12 years there has been 1,686,650,816 feet of logs cut from the Menominee nd tributaries. The cut of the past winter will ggregate about 306,500,000 feet, which, added to 20,000,000 feet of old logs on hand, gives a total stock of 326,500,000 feet. The log cut of the past winter exceeds that of the last previous one nearly 66,000,000.

AN Ottawa dispatch says that the tug *Allan Gilmour*, with eight barges of lumber, got into the Long Sault on the night of May 8th, and it was found necessary to cut five barges loose, which were badly wrecked in going through the rapids. J. A. Kirby, of this city, is owner of the barges; the loss is estimated at $4,000, on which there is an insurance of $1,000.

LAKE freights on lumber are quoted at $1.50 from Muskegon to Chicago; $1.50 from Grand Haven; $1.25 from Manistee. No rates have been named yet for ports that are not open. The vessel market is pretty firm, and under the impression that there will be plenty of stuff to carry this season, owners expect to command paying figures.

THE Somo River (Wis.) Improvement Company has had about sixty men engaged for some time in building dams and otherwise improving the stream, to facilitate the driving of logs. The dams have been thoroughly repaired and two ones built, making five in all. There are about ten million feet of logs to come out of that stream, about four millions of which will be run to Stevens' Point.

THE Toronto *Globe* says that it is proper to have it understood by vessel-men that there will be nothing done in this port for a week in lumber charters. The canal at Oswego will not be open till the 17th, and the docks at Oswego are overcrowded. It is said by shippers that there will be a month's good sailing when the season commences. It is hoped that rates will be maintained as they are at present.

IT is learned from the *News and Reporter* that the Ducey Lumber Company with a capital of $50,000 has been organized at Muskegon for the transaction of a general lumber business. P. A. Ducey is president; John Lynch, vice-president, and E. C. Misner, secretary-treasurer. The company has purchased the new mill of the Torrent & Arms Lumber Company, for $40,000. The new firm is a strong one and will do a successful and profitable business.

MR. JOHN OLIVER, of John Oliver & Co., Toronto, Ont., has been in Chicago for the past two weeks buying and selling hardwoods. Mr. Oliver has so much faith in the prospective value of certain kinds of wood, that even at present prices he would rather buy than sell. He has men in Indiana and adjoining states, buying extensively. The firm does an immense business, and is the only one in the Dominion in the hardwood trade exclusively.

THE small value of birch wood for fuel, and its lack of toughness and strength, except in the smaller twigs, have led to its general neglect in the arts. Our more enterprising builders of railway cars, however, have discovered that its light weight, close grain, and rich finish make it admirably suited for certain applications where fine finish and bright effects are desired. The contrasts presented when white birch and light colored ash are relieved by the red of the cherry birch, are said to be queer looking, but very pleasing to the eye.

THE Caughnawaga Indians consider their remuneration not high enough. They are engaged in piloting rafts of timber down the Lachine rapids during the open season, for which they are paid $2 per day. They now demand $2.50, and add the presumptuous condition that no white man be employed in this peculiar but dangerous calling. The redskins went the length of assaulting a lumberman's agent who had some French-Canadians engaged on the work. Of course they will have to pay for their obstreperousness.

LOUISVILLE, KY., enjoys a very respectable lumber trade of some fifteen to twenty million feet, half of which is sawed there. In the report of the Board of Trade for 1880, the number of establishments in this branch of manufacturing is mentioned as three; capital employed $300,000; number of hands, 132; wages, $1.35 to $2.50 per day; number of saws, 126; number of circular saws and lath mills, six; value of logs, $124,000; value of material, $126,375; lumber produced, 10,500,000 feet; number of lath and pickets, 3,342,500; value of products, $212,500. The Ohio Falls Car Manufacturing Company, on the Indiana shore, at Jeffersonville, uses 50,000 feet per day, or as much as is sawed in Louisville, principally Michigan pine. The car receipts in the city amount to about 3,000 cars per year, while considerable more comes by river.

We have received from Messrs. Toker & Co., publishers of the REVIEW, Peterborough, the tenth number of THE CANADA LUMBERMAN, a paper devoted to the interests of the timber and lumber industries of the Dominion. The first nine numbers of this publication were issued in Toronto by Mr. Alexander Begg, but the copy before us shows that it has changed hands and come under the able management of Messrs. Toker & Co. The LUMBERMAN will be purely a trade organ, non-political in its character—a paper for the dissemination of facts and figures concerning the trade; and in the interests of our woods and forests, it will sustain an able part. The contents of the LUMBERMAN are of so much value that we believe every one interested in that upon which it professes to treat, should become a subscriber. It will be sent to any address for $2.00 per year.—*Campbellford Herald.*

Lack of Air.

Some workmen think themselves "tired" when they are only poisoned. They labor in factories, breathe air without oxygen, and live in an atmosphere of death. They are, too often, allowed to smoke, and thus add fuel to the flame which is consuming them. They knock off work "tired" and listless, when they are merely weakened by foul air and made dull and heavy by an atmosphere charged with disease. They keep the windows shut and close the door on health, while they lift the gratings of the tomb by breathing and re-breathing the poison from their own lungs, and the floating particles of matter about them. Open the windows—let in the sunshine and the breeze, stop smoking, and you will soon find that it is the poison of confinement, and not labor, that wearies and tires.—*Montreal Herald and Star.*

THE celebrated cypress tree that had stood near the city of Sparta, Greece, for over 2,800 years, and was described by Pausanius 400 years before the coming of Christ, has been destroyed by a band of strolling gypsies, who camped beneath it and left their fire burning. It was 75 feet high and 10 feet in diameter near the ground.

SAWYER, ENGINEER & MILLER

A PRACTICAL MAN to take charge of a Saw Mill, Shingle Mill, one run Flour Mill, with power sufficient to run alternately, situated on Duck Lake, N. W. T., 500 miles west Winnipeg. Engagement for a year and expenses paid. Apply immediately, stating experience, reference, salary expected, when could leave. A man accustomed to our machinery preferred,

L14 WATEROUS, BRANTFORD.

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Electro and Stereotyping Foundry

We have added to our plant all the latest improved machinery for Electro and Stereotyping, and the manufacture of Printers Furniture, facilities for executing work which no other establishment in the Dominion possesses, and not excelled by any on the continent. A large assortment of various cuts constantly on hand.

FLEMING & SON,
L14 26 Colborne St., Toronto.

CANOES!

The undersigned keeps Canoes suitable for LUMBERMEN, SPORTSMEN and others constantly on hand. Price List on application.

WILLIAM ENGLISH

8L14 PETERBOROUGH, ONT.

THE STEAMER "NORSEMAN."

(R. CRAWFORD, MASTER.)

Will make her regular trips on this route commencing on Wednesday, the 20th of April, 1881, leaving Cobourg every morning at 7.30 and Port Hope at 9 o'clock, on arrival of Grand Trunk Railway trains from the East and West, connecting at Rochester with the New York Central, Northern Central, and Erie Railways. and the Lake Ontario Division of the Rome, Watertown and Ogdensburg Railway for all points east, west and south.

RETURNING,—Will leave Charlotte (Port of Rochester) daily at 9 o'clock p.m., except Saturdays, when she will leave at 3 p.m. for Port Hope direct.

Dealers in stock will find this the cheapest and most expeditious route to Oswego, Boston, Albany, New York. etc., etc. For further information apply to

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or C. F. GILDERSLEEVE. Port Hope.
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GLOVE MANUFACTURERS.

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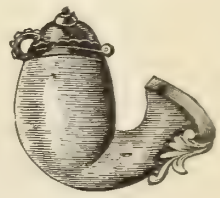

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TENDERS, addressed to the Postmaster General, will be received at Ottawa until Noon, on Friday, 6th May, for the conveyance of Her Majesty's Mails, on proposed Contracts for four years, once, and three times per week each way respectively, between

Apsley and Cheddar, and Peterborough and Apsley,

from the 1st July next. Conveyance to be made in a public or other vehicle. Printed notices containing further information as to conditions of proposed contract may be seen, and blank forms of Tender may be obtained at the Post Offices of Peterborough and Apsley.

GILBERT GRIFFIN,
Post Office Inspector's Office, Kingston, 25th March, 1881. Post Office Inspector. a15

BBB
Burdock BLOOD Bitters

Burdock Healing Ointment should be used in connection with Burdock Blood Bitters for curing Ulcers, Abscesses, Fevers, Sores, &c. Price 25 cents per box. T. MILBURN & CO., SOLE AGENTS, TORONTO.

SCHOOLS OF FORESTRY.

Mr. David D. Thompson, of Cincinnati, who has taken much interest in all forestal subjects. gives some valuable information concerning the schools of forestry established in Europe. In order to secure the best results from the culture and care of forests, says this writer, which require a carefully planned system of regulations, with competent agents to look after their application, the European governments, with two or three exceptions, have established schools of forestry, most of which are now in a flourishing condition. The students in these schools have entered that they may thoroughly qualify themselves for the work they will have to perform, and the importance of which they appreciate. For them the salary is not the all-important question—as is usually the case with scientists.

These schools of forestry are of two kinds:—First, those designed for the study of forest sciences and collateral branches, which are called in German, *Forstakademie;* and, second, the *Allgemeine Hochschule*—colleges or polytechnic institutions in which forestry is only a a department. Before entering the *Forstakademie,* students are required to have taken a course in some preparatory or other school; and in some schools to have had, in addition, a practical experience in forest planting and management under the direction of skilful forester. Practical experience in the care of forests is, in all schools, an important feature in the regular course. The rules governing admission are very strict. Either a certificate of graduation from a responsible institution or other evidence of efficiency is always required; and in the service of the state certain conditions as to age, nativity, etc., must be complied with. The object is to give such instruction as is needed in the planting and care of forests. The course of study embraces whatever will be of use for such a purpose. It includes the natural sciences, and the numerous details of administration required. Its usual result is to impress the student with the responsibilities of his work and develop a habit of close observation.

One of the oldest and best schools of forestry in Europe in at Nancy, France, and to it the department of Muerthe, of which Nancy is the capital, owes much of its rare rural beauty. The school is liberally supported, and is fully supplied with cabinets, museums, apparatus, and appliances of every sort. To those who prepare for state forest service instruction is free. The importance of this service may be inferred from the fact that the state forests cover an area of nearly 3,000,000 acres, with a gross revenue of nearly $7,000,000, and a a net revenue over all expenses of over $5,000,000. The total expense for board, lodging, uniform, instruments and pocket money is between $400 and $500 a year. Foreign students are admitted, with a moderate special charge. The English government usually has several students at Nancy training for forest service in India.

The course of study occupies three years. Every student is required to devote 1,500 hours to study each half year. Lectures are delivered on the exploitation of forests; relation of forests to climate; natural history of different kinds of trees; management of forests; conversion of one form of forests into another; desirable qualities and defects of woods, etc. A large number of lectures of an hour and a half each, and the same amount of time allotted for preparation of the topic of the lecture, are devoted to botany and mathematics. There are also lectures and lessons in road and bridge building, in forest law, and in the German language, together with some military instructions and drill, and practice in horsemanship. During the summer session, about a month is spent in botanical and professional excursions in the Vosges, the Jura and other mountains, in which are visited forests in all stages of treatment and exploitation, and where the students are required to practice in the mensuration of wood and timber. Of all these observations and experiments each student must prepare a report.

In addition to the branches enumerated in the third year, attention is given to zoology, especially to entomology, the ravages committed by insects upon forests, the means of averting or destroying them, and of recovering a forest ravaged by them; the fixation of sand dunes, the reclamation of barren wastes, and the reforesting of denuded mountains; the geology and mineralogy of the mountains of France, mountain torrents, their causes and the means of preventing them; the chemistry of vegetation and all that relates to the production and assimilation of atmospherical and terrestrial elements.

In Germany are found the oldest, the best endowed, and, in some respects, the best managed schools of forestry in the world. In the latter part of the eighteenth century, occasional lectures on forest science was given in the Berlin University. As early as 1821 an academy for forest instruction wss established in Berlin, but, on account of the absence of suitable forests in the neighborhood of that city, it was, in 1830, removed to Neustadt Eberswalde, where was abundance of forests, and the name changed to the High Institution for Forest Science. The course of study embraces chemistry, physics, meteorology, mineralogy, geognosy, botany, anatomy of plants, vegetable physiology and pathology, microscopy, zoology, entomology, geodesy, wood measuring, surveying, plan drawing, public economy and finance, cultivation of forests, forest improvements, forest botany, protection of forests, calculation of the value of forests and forest statistics, administration of forests, redemption of rights of usage, forest history, civil law, criminal law, jurisprudence, construction of roads, hunting and shooting.

There is connected with this school a drying house for seed, beds, and nurseries, specimens of a great variety of trees for botanical study, and a museum containing specimens of birds, insects, and animals found in forests, all neatly arranged in cases. Specimens of the branch, leaf, bark, wood, or cone of trees damaged by animals or insects, are exhibited side by side with the same parts in a healthy state, in order to teach the student to know at a glance the nature of any injury to a tree, and the animal, bird, or insect causing it. Stuffed squirrels, beavers, rats, and mice are so placed as to represent the same in nature, gnawing at the bark, grubbing at the roots, etc.; and insects are shown in the several stages of larvæ, chrysalis, caterpillar or moth, with all all their ramifications in the stems or branches of trees. Besides these are specimen blocks of almost all descriptions of timber. A number of other schools of forestry have been established in Austria, Italy, Spain, Portugal, Denmark, Sweden, Finland, and Russia.

The American people ought certainly to be wise enough to profit by the sad experience of other countries, and not only regulate the necessary, and put a stop to the unnecessary, destruction of their forests, but imitate their example in endeavoring to restore them. This may be accomplished in almost innumerable ways, if only the people can be made to realize the necessity for it, and a desire awakened to have it done.—*Northwestern Lumberman.*

THE CATALPA.

A western paper believes that the railway tie of the future will be of this wood. The Fort Scott, Texas and Gulf railroad has planted 300 acres of young trees, and the Iron Mountain railroad 100 acres, near Charleston, Mo. On the roadbed of the latter company, ties of this wood have lain in the muddy silt of the Mississippi for 12 years, and are still in a good state of preservation. They have outlasted two sets of white oak ties, and bid fair to survive the third. Fence posts in Indiana and Illinois are now sound after having been in service 40, 50, and even 75 years. In the muddy regions about Cairo, where it is grown extensively, it is used as corner stones for the most substantial building. It is of an elastic nature, but not so soft and light as cottonwood. Dr. John A. Warder, President of the American Forestry Association, claims for the catalpa a durability and power of resistance to the influences of the elements possessed by no other wood. It is found in the Mississippi valley, and on the shores of the tributaries of the great river. It bears a large, white, highly-perfumed flower, and grows rapidly.

Ask your druggist for a trial bottle of BURDOCK BLOOD BITTERS, it will only cost you 10 cents, and a few doses will prove its efficiency as a health restoring Tonic-regulator of the Bowels, Liver and Kidneys. It is a specific for all diseases arising from impure blood and disordered secretions.

THE GROWTH OF TREES.

Trees, says Elizur Wright in an eastern paper, record their own history. The stump not only tells the age, but in what years the departed grew vigorously and in what it did little more than hold its own. I not long ago, in Ohio, measured the stump of a sugar maple, recently cut, and found it thirty inches in diameter. The tree had lived 125 years. In the first sixty-three years, while it had stood in the dense forest, it had acquired but nine inches in diameter. After the forest was cut away, and it was left with only a few scattering companions, it soon assumed a superior rate of growth, which it maintained till nearly the last, so as to add twenty-one inches of diameter in sixty-two years. The rings averaged about seventeen-hundredths of an inch in thickness, whereas, in the first sixty-three years they had averaged but seven-hundredths.

In Sweden it is ascertained that a forest of mixed wood on medium soil grows about a cord of wood a year on an acre of land. If much more than a cord is removed from an acre in a year, the production is reduced. But to keep the production from diminishing, it makes all the difference in the world what trees you take away, whether you take those which are beginning to decay, or those which are in the rapidest stage of growth. It is only by the best judgment in thinning out that the capital of growth can be kept whole after a forest has become well established.

If we take two trees of the same species—say an oak sapling that is four inches in diameter, and sixteen years old, and twenty feet high, and a tree that is twenty-four inches in diameter, ninety-six years old and sixty feet high—a little calculation will show us, supposing the thickness of the rings now equal, that the sapling is making 2.18 of a cubic foot of wood in a year, while the tree is making 3.924 cubic feet in a year. It will take between thirty-two and thirty-three such large trees on an acre to make a cord of wood in a year; and it will take about 590 of the saplings, of nearly four to the square rod; and it would take more than seventy to be cut to make a cord, so that in so young a forest a cord cannot be taken away without trenching on the capital. It is not, in fact, till a forest is made 100 years old that it can yield so much as a cord an acre without trenching on the capital of growth. But when it gets of that age, if the right care is taken, the average cord it yields is much more valuable than mere firewood. The larger and more perfect the sound tree the more valuable per cubic foot.

The forest I have supposed, consisting of thirty-two two-foot trees to the acre, would make only between forty and fifty cords of wood to the acre, if all cut at once. But that would be a destruction of capital which it would take nearly 100 years to restore; a capital which, if kept up by replacing every tree cut, will continue forever to yield a net profit of $10,000 per acre yearly.

A forest, not to be ruined must be managed very much as death manages the human race. Trees must not be taken out faster than they spring up, nor all of one age or sex; only those that are ripe, sickly, and in the way. By adapting the species to the soil, even the poorest soils will yield immense returns. The rocky hills of Massachusetts, which will not grow very large oaks or walnuts, will cover themselves with enormous pines and hemlocks, if they have an opportunity. As evergreens do not, like other trees, perpetuate themselves by sprouts from the stumps, when a forest of them is slaughtered by the axe, their tender seedlings are prevented from replacing them by the sun, frost and cattle; while the hardier seedling of the deciduous woods—such as birch, maple and ash, and the sprouts of such oaks and hickories as may have been mixed with the evergreens—have a better chance, and thus take the place of the resinous woods on a soil not so well adapted to them. With a little judicious care and forethought, a wood of scrubby oak or hop-pole hickory may be converted into a glorious pinery, yielding masts for navies. But, as the individual man has, on the average, a life shorter than that of a tree, it requires the state, which does not die, to do this.

The Middlesex Fells is a tract of nearly 4,000 acres within six or seven miles of Boston, of which more than 3,000 consist of rocky and blue-gravel hills, once covered with lofty pines and hemlocks, nearly all of which have given place to oaks and hickories, living lives of semi-starvation and devastation by frequent forest fires. There are about 140 proprietors, assessed at an aggregate sum between $200,000 and $300,000, and deriving an income from the fuel of a good deal less than one per cent. over the taxes. And this is taking annually more than is replaced; so that the tract, in spite of its woody green foliage in summer and rainbow tints in autumn, is growing every year more desolate.

It has been proposed that the citizens of the towns within whose territory this mostly unoccupied tract lies, and others interested in forest culture, should purchase this tract and give it to the state for the purpose of inaugurating a scientific and common-sense system of care for the trees. Should this be done, plainly, in 100 years from now the state might be enjoying from this tract alone a revenue of $30,000 a year, while it would be a source of health and recreation quite beyond the power of money to measure.—*Northwestern Lumberman.*

WEIR MEASUREMENTS.

Within the past few years much has been said and written for and against the reliability of measurements of water flowing over weirs; this has arisen through the great diversity of results obtained by different persons, who have used the same formula for computation of data. Turbines of almost every make, tested by their builders, have seemingly given highly useful effects; while in actual use some of them have not proved economical in the use of water. This has had a tendency to discredit weir measurements, but unjustly so, as may readily be explained, for the matter is one of great simplicity, notwithstanding the complications thrown around it by those who have supposed a long array of decimals denote profundity and accuracy. Any weir under exactly the same conditions will repeat results invariably; but a formula based upon certain conditions, will not give correct results if those conditions are changed. All brooks and rivers vary much in width and depth, yet the same water flows through the narrow as well as the wide places, the velocity, of course, varying with the cross section of the stream. The velocity, however, does not cease immediately upon entering a wider or deeper part, but continues until the momentum is lost, and the general level attained; this of itself would prove the necessity of placing a weir at a considerable distance from the discharge of a higher head. The Francis formula is based upon the natural flow of the water, which for a depth of one foot over a weir is about three feet four inches per second; and it must be evident that such formula is entirely inapplicable where the velocity is four or five feet per second, as it may be if the weir is placed close to the discharge of a poor turbine, where the water leaves the wheel with half the velocity due the head; or where a cross section of pit or stream approaches the weir is but little greater than the capacity of the weir itself. It is plain that under such conditions the velocity will vary according to the useful effect of the wheel, and equally plain that no reliable correction for velocity can be applied. Had this been considered, much trouble and expense might have been saved the past twenty-five years; for it is not likely any builder would have knowingly continued the manufacture of forty per cent. turbines. The cross section of a pit or stream, up stream from a weir, should be at least five times the cross section of the stream flowing over it; and for a discharge of two thousand cubic feet per minute, the weir should be fifty feet from the discharge of the turbine or opening into pit. Racks should never be used, as they obstruct and raise the water so that it passes through with renewed velocity. If there is a horizontal discharge towards the weir, check the current by zig-zag breakwaters. For measuring the flow of a river the weir or dam cannot be too large; but it may be for measuring the discharge from a mill where a governor is used, as the varying discharge, caused by adding or throwing off machinery, may prevent accuracy if too much time is required for the water to nd its proper level.—*James Emerson.*

E. S. VINDIN,

Commission, Shipping, Forwarding and General Agent.

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WHOLESALE DEALER IN

Clear, Pickings, Common and Hardwood Lumber, Lath, Shingles, &c.

BILL STUFF CUT TO ORDER.

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And Shipping Agents.

OSWEGO, N. Y.

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JAMES HADDEN,

MANUFACTURER OF

Shingles and Dressed Stuff.

Foxmead, P. O., County of Simcoe, Ont.

Two Planers for sale or exchange for a Boiler. b26

White Oak and Ash

LUMBER WANTED.

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YATES AND STRATFORD,

BRANTFORD. 15

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RECUT BY HAND, and EQUAL TO NEW FOR USE

PRICE LIST on application.

THOS. GRAHAM, Manufacturer,

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To Lumbermen.

The Subscriber makes to order all kinds of

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Hammocks, Tarpaulins, Waggon and Horse Covers,

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MANUFACTURER AND WHOLESALE DEALER IN

Lumber, Lath and Shingles,

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HAMILTON, ONT

MILLS AND TIMBER LIMITS AT SILVER CREEK, TIAGO P. O., ONT.

Bill Stuff cut from 10 to 60 feet. Cedar Posts on hand.

Orders sent to M. BRENNEN, Tiago, P. O., will receive prompt attention b15

WANTED

A COMPETENT MAN, with thorough knowledge of Tram Railways, to go to Jamaica, to take charge of the laying and keeping in order the rails and road bed of a ten mile tramway, and when not employed to make himself otherwise useful. To a first-class competent man good salary will be paid.

Address, with references and salary expected,

The Waterous Engine Works Co.,

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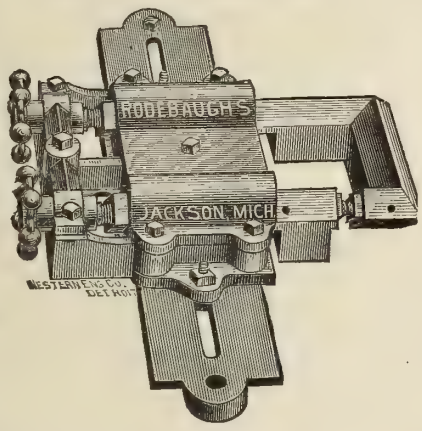
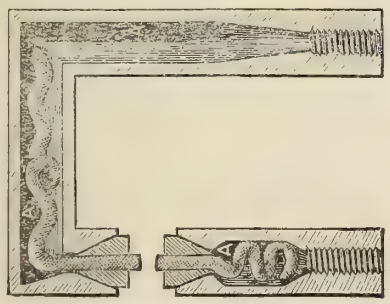
SAW GUIDE!

Self Oiling—Ready Adjusting.



G. W. Rodebaugh's patent Saw Guide will recommend itself to every practical sawer. All that is required is a trial.



No heating of Saws. No danger in setting. Trial free of charge. ☞The whole complete only $25. Manufactured in Canada by

KERR BROS., Walkerville, Ont.

who may be applied to for further particulars; or address:

G. W. RODEBAUGH & CO.,

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WITH THE TOMLINSON

(PATENT)

BARREL MACHINE

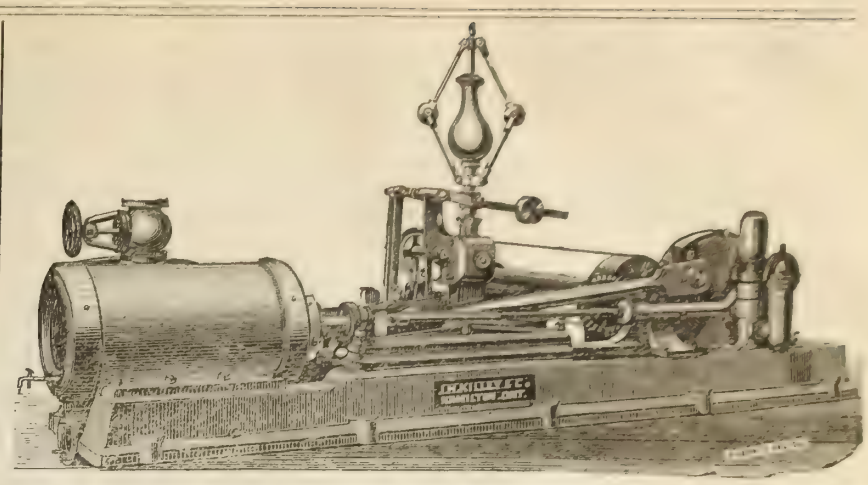
One man and two boys can turn out

One Hundred and Fifty First-class Flour Barrels in Ten Hours,

made from veneered wood of two thicknesses. The inside is one solid sheet of veneer running around the barrel, making in reality one hoop from top to bottom, and in the outside thickness the grain is reversed, running up and down, finished with five hoops two inches wide, reversed again, making the barrel almost three thicknesses, which gives the package superior strength, tightness and durability over the ordinary hand-made flour barrels, yet with all its many advantages cost less than the old style of package. My barrel machine is arranged to make all sized packages from a large barrel down to small nail kegs, butter packages and cheese boxes. I am open to prove at any time the superior strength of my barrel. That one will stand more hardship by any actual test than one hundred of the old ordinary flour barrels. County rights for sale, and all information given by applying to

JAMES TOMLINSON, Patentee,

113 KING ST. EAST, TORONTO. b15



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Manufacturers of Economical, Variable, Cut-off, High Pressure, and

Condensing Engines

Patent Circulating and Self-Cleansing Boilers, Improved Feed Water Heaters and Patent Steam Blast Apparatus for Improving Draft and Economizing Fuel,

First-class Grist & Saw Mill Engines and Machinery

STEAM ROAD ROLLERS and STONE BREAKERS. 6L12

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This House stands at the head, having manufactured Clothing in Toronto for over Forty Years, and always gave satisfaction to customers. ☞THEY IMPORT THEIR OWN WOOLLENS FROM EUROPE, and Manufacture the Clothing on the premises.

GENTS' ALL WOOL SUITS, $7.50, $9.00 and $12.00

GENTS' FINE WORSTED SUITS, $11.75, $15.00 and $18.00

GENTS' SHIRTS, UNDERCLOTHING, TIES and GLOVES

R. WALKER & SONS,

GOLDEN LION, KING STREET, TORONTO. b19

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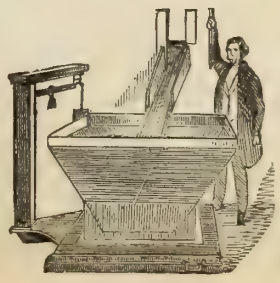

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These Scales are Manufactured of the Very Best Material, and warranted to give satisfaction. Send for Prices and Testimonials.

JAMES C. WHITE & CO.

b15 102 Adelaide St. East, Toronto

Market Reports.

Montreal.

Ash, 1 to 4-in, ₱ M	$15 00@17 00
" square ₱ M	22 00@25 00
Basswood, ⅞-in, ₱ M	13 00@15 00
" 1-in., "	14 00@17 00
Black walnut, culls, ₱ M	55 00@60 00
" 2nd quality, ₱ M	85 00@90 00
" 1st "	100 00@105 00
Cedar, round, ₱ ft	0 09@ 0 12
" flat, "	0 08@ 0 10
" square "	0 10@ 0 12
Grey elm, 1st quality, ₱ M	22 00@27 00
Rock "	35 00@40 02
Spruce, 1 to 3 in., ₱ M	8 00@ 9 00
" square, "	12 00@14 00
Red oak, ₱ M	35 00@40 00
Pine, clear, 1st quality, ₱ M	35 00@45 00
" 2nd "	21 00@27 00
" 3rd "	12 00@15 00

Chicago.

CHICAGO, May 4th, 1881.—The cargo market opened firmly, as the *Lumberman* predicted it would. Within the last week a considerable number of cargoes have reached the Franklin street docks, and all of them have been placed at prices that may, without exaggeration, be called good. There has been but little variation as yet in the figures. Green piece stuff of good quality has brought $10.25 without difficulty, the poorer grades ranging as low as $9.75. Common inch has sold at $10.50@11, and the sale of one cargo of a better sort is reported at $16.25. No really choice stock has yet come to the market, so that a quotation of it cannot be made. Shingles open very firm, the standards at $2.40 @2,50, and extra A's at $2.60@2.70. Only one cargo of lath has arrived. It was not of fair quality, and the price received for it—$1.75—cannot be said to fix their market value.

CARGO QUOTATIONS:

Joist and scantling, green	$ 9 75@10 25
Mill run, medium, "	12 00@16 00
Mill run, common, "	10 50@11 00
Shingles, standard	2 40@2 50
Shingles, extra A	2 60@2 70
Lath	1 75@2 00

Receipts and shipments of lumber and shingles from January 1st to and including May 3rd:—

	Receipts.		*Shipments.*	
	Lumber.	*Shingles.*	*Lumber.*	*Shingles.*
1881	110,499,000	62,582,000	176,252,000	30,279,000
1880	138,461,000	78,810,000	169,129,000	30,313,900

Some of the yards are having all the business they can do, but the general report is that trade is not as active as it might be.

In certain directions there is a very stubborn feeling against the high prices of the cargo market. It is asserted by a portion of the dealers that if the opening prices are sustained it will be an exception in the history of the trade, and they do not propose to swap much of their money for lumber at present prices. They do not want piece stuff at more than $8.50, and some of them at $8. That they will be able to buy it at such figures they feel confident, while others feel as confident that the opening prices are as low as any that will be seen this season, and believe that their erring brethren will regret their procrastination.

Regarding shingles there seems to be but one opinion outside of the men who are interested in their manufacture, and that is that they ought to sell for less money. Some of the dealers whose yards have not a shingle in them are getting along by borrowing and buying from their neighbors, and swear by an uplifted hand that they will continue so to do for a while before they will lay in anything of a stock at present cargo rates. The market is pretty clean of standards, and it will require heavy arrivals to make a full stock.

Most of the stock sold has been that wintered over at the mills, which is called dry in some cases and partly dry in others, depending on its condition. Dry lumber generally ranges about $1 above green, though a smaller difference is made on some consignments whose condition is not much better, so far as seasoning goes, than that of stock fresh from the saw. A good many mills are running now, and it is thought that another week will bring to the market a fleet that will afford a better test of the temper of buyers and sellers than any received up to this time.

The *Lumberman* is obliged to admit that the feeling among the frequenters of the wholesale market is difficult to describe. The sellers talk firmly enough, and profess to believe the situation and outlook of trade warrants the expectation that prices will be maintained; but on the other hand some of the buyers, at least, are holding off, hoping that they will be able to secure what they want at lower figures. They characterize the present prices as exorbitant, and declare themselves unable to figure out any way in which the lumber can be handled through the yards without netting them a loss. One dealer informed us that though he had a number of men under pay, with nothing to do, he thought it the better plan to let them stand idle than to give them lumber to shove at present prices. Our readers will observe from this that there are two opinions about the future, and that it is not by any means certain which is the correct one.—*Northwestern Lumerman.*

STOCK ON HAND MARCH 1.

	1881.	*1880.*	*1879.*
Lumber	322,491,234	263,452,591	234,106,246
Shingles	125,648,264	113,593,000	129,180,000
Lath	33,388,899	30,126,770	24,587,479
Pickets	1,589,064	849,238	376,299
Cedar posts	79,887	47,797	306,544
Hardwood	11,000,000	.....	.....

YARD QUOTATIONS—CAR LOTS—DRY.

FINISHING LUMBER—ROUGH.

1st, 2d clear, 1, 1¼ and 1½ in.	$43 00
1st and 2d clear, 2 in	45 00
1st and 2d clear, 3 in	50 00
3d clear, 1¼, 1½ and 2 in	38 00
7 and 8 inch clear	32 00
Select 1 in. A	32 00
Select B	22 00
1¼, 2 in. B	26 00
7 and 8 in. B	26 00
Clear and Select 2x4	28 00
2x6 and 2x8	32 00

All one length $1 extra.

WAGGON-BOX STUFF.

3-in and up. A	$43 00
4-in. and up. B	37 00
14-in. and up. C	28 00
D	17 00

All 14 feet $2 extra.

STOCK BOARDS.

12 in. A, 12 to 16 ft	$37 00
12 in. B	33 00
12 in. C	28 00
12 in. D, 12, 14 and 16 ft	17 00
12 in. D, 18 ft	19 00
12 in., 20 ft	20 00
10 in. A	35 00
10 in. B	30 00
10 in. C	24 00

COMMON BOARDS—ROUGH.

	Dry.
Common boards, 12 in	$15 50
10 and 20 ft	14 50
12, 14, 16 and 18 ft	14 00
Culls, all lengths	11 50
1½ and 1½ com	13 50

TIMBER AND DIMENSION—DRY.

Small timber, 18 ft. and under	$12 00
12, 14, 16 and 18 ft. joist	13 00
2x4, 10 and 20 ft	14 00
2x4, 18 ft	13 00
20 feet	14 00
22 feet	17 00
24 feet	17 00
26 feet	20 00
28 feet	20 00
30 feet	20 00
2 in. cull plank, all widths	9 00
2x4 culls, all lengths	9 50

SHINGLES—16-INCH—DRY—CAR LOTS.

Clear	$3 25
Extra A	3 00
Standard A	2 90
Cedar shingles	$2 00@2 50

Ends of cars and less than car load lots, five cents per thousand extra. The shingles handled in the Chicago market are all 16-inch.

PICKETS—LATH.

Flat, select and clear, d. and h	$20 00
Square, d. and p	20 00
Flat, rough, good	15 00
Flat, rough, common	11 00
Dry lath	2 25

CEDAR POSTS AND POLES.

Sawed ½ of 6½ in., 7 ft	$19 00
½ 6 " 7 ft	10 50
½ 7 " 7 ft	12 00
½ 8 " 7 ft	16 50
¼ 8 " 7 ft	9 00
¼ 9, 10, 11 and 12 in., 7 ft. long	12 00
in., round, full length	12 00
5 " " "	16 00
6 " " "	20 00
7 " " "	22 00
8 " " "	30 00
10 feet, per inch	6 00
12 " "	9 00
14 " "	10 00
16 " "	$11 00@13 50
20 " "	16 00

Oswego, N.Y.

Three uppers	$42 00@45 00
Pickings	32 00@35 00
Fine, common	20 00@25 00
Common	14 00@16 00
Culls	12 00@14 00
Mill run lots	16 00@20 00
Sidings, selected, 1 inch	30 00@33 00
" 1¼ inch	30 00@38 00
Mill run, 1x10, 13 to 16 ft	16 00@20 00
selected	20 00@25 00
shippers	15 00@16 00
Mill run, 1 and 1¼ inch strips	15 00@18 00
Culls, selected	22 00@30 00
Culls	11 00@13 00
1x6 selected for clapboards	24 00@35 00
Shingles, XXX, 18 inch, pine	3 50@ 3 75
XXX, 18 inch, cedar	3 00@ 3 50
Lath	1 50@ 1 75

THEY ALL DO IT.—Everybody uses "TEABERRY" for the teeth and breath, the newest, brightest, cosiest little toilet gem extant. Try a 5 cent sample.

Albany.

The Albany *Argus* says a fair business is reported for the past week. The stock wintered, notwithstanding the steady demand, shows a good assortment on hand, and this being at present the acknowledged low priced market, the wonder is that it has not been more thoroughly reduced. However, the temptations which low prices offer to the buyer may, possibly, before the opening of the canal on the 17th inst., lessen materially what is on hand.

The complaint is becoming daily more general among the lumber merchants here that they cannot bring lumber from points of supply and realize any profit out of the transaction at today's quotations, the price asked by the manufacturer and the price baid by the buyer being too close, leaving no margin for the distributor.

The determined attitude of the Michigan and Canadian manufacturer to get his price for his lumber, together with the unquestioned certainty of very high lake freights should demonstrate beyond a doubt that much higher prices must prevail; and it is noticeable that those who thirty days ago proclaimed their opinion as otherwise, now seriously acknowledge the importance of an immediate advance; and the sooner the fact is recognized that the manufacturer's cry is "no surrender"—and he means it—the sooner will the business of the Albany Lumber Market assume its proper commercial tone. The purchases made in the fall of 1879 were favorable to the buyer, and those made in 1880 on a largely increased price founded the prosperous results of last season; but the stock coming into market this year has no such talisman to help it out.

Stocks of spruce and hemlock are very light; receipts are taken as fast as they arrive by rail. Mills on the North River are all shut down on account of high water. The lakes on the Upper Hudson are still full of ice. The recent loss by fire of the Bloomingdale Morœ mill will reduce the supply from that source considerably.

River freights are:—

To New York, ₱ M ft	$ @1 00
To Bridgeport	@1 37½
To New Haven	@1 37½
To Providence, Fall River and Newport	2 00@2 25
To Pawtucket	2 25@2 50
To Norwalk	1 25@1 30
To Hartford	@2 00
To Norwich	@2 00
To Middletown	@1 75
To New London	@1 75
To Philadelphia	@2 00

Quotations at the yards are as follows:—

Pine, clear, ₱ M	$50 00@60 00
Pine, fourths	45 00@55 00
Pine, selects	40 00@50 00
Pine, good box	17 00@28 00
Pine, common box	14 00@17 00
Pine, 10-in. plank, each	00 38@00 42
Pine, 10-in. plank, culls, each	00 20@00 22
Pine boards, 10-in	25 00@27 00
Pine, 10-in. boards, culls	17 00@18 00
Pine, 10-in. boards, 16 ft., ₱ M	25 00@30 00
Pine, 12-in. boards, 16 ft	25 00@30 00
Pine, 12-in. boards, 13 ft	26 00@28 00
Pine, 1¼ in. siding, select	38 00@40 00
Pine, 1¼-in. siding, common	15 00@18 00
Pine, 1-in. siding, select	38 00@40 00
Pine, inch siding, common	15 00@18 00
Shingles, shaved, pine	6 00@00 00
" 2nd quality	4 50@00 00
" extra, sawed, pine	4 20@04 25
" clear, "	3 25@00 00
" cedar, mixed	2 75@ 3 00

New York.

The *Real Estate Record* says that on the wholesale market everything appears to be in very good shape and the expressions generally are cheerful and confident, the few grumblers previously referred to merely serving as a shading picture. Consumption on local account is daily increasing and there is quite a little few of out-of-town orders from parties who have a trade on special lines of stock, but cannot use a general assortment to advantage. They therefore find it more to their advantage to select here than to take full cargoes, etc,, and saddle themselves with a large percentage of unsaleable rejections. The pressure of supplies seeking a market here has also been pretty well received wherever it existed and receivers manifest a more determined spirit in resisting attempts to force down values. From primary points the advices indicate pretty good supplies of nearly all the leading descriptions of stock, but orders also plentiful and in surplus probably for some time to come.

Spruce of desirable and attractive quality has a pretty steady position and the feeling among sellers is comparatively cheerful. Dealers still have their piers pretty well filled with recent receipts, and in the majority of cases it would be difficult to attract demand, yet quite a number of buyers failed to "get in" on the late break and are now a little anxious to negotiate. Receivers think it would be a very poor cargo not to command $14.00 ₱ M, and on specials $16@17.00 are asked with extra difficult at $18 ₱ M.

White pine shows very little change of a decided character. Prices generally very firm and supplies indifferently offered. We quote $17@19 ₱ M for West India shipping boards; $24.50 @26 for South American do.; $16@16.50 for box board; $17@17.50 for do. wide and sound do.

Yellow pine remains in the same firm and well supported position before noted, and the selling interest generally is confident. We quote random cargoes at about $23.50@25 per M; ordered cargoes, $26@27.75 do.; green flooring boards, $24@26 do.; and dry do. do., $25.50 @27. Cargoes at the South, $15@19 per M for rough, and $20@24 for dressed.

Shingles reported about as before, the demand proving fair on most regular outlets at a steady line of values and no serious accumulation of stock offering. We quote pine shipping stocks, $4 for 18-inch, and Eastern saw grades at $2.50 @4.50 for 16-inch, as to quality and to quantity. Machine dressed cedar shingles quoted as follows: For 30-inch, $16@22.25 for A and $28.75 @33.35 for No. 1; for 24-inch, $16.50@16 for A and $16.75@23 for No. 1; for 20-inch, $5@10.50 for A and $11.25@11.75 for No. 1.

Boston.

The demand continues to grow daily, and sellers are confident and are preparing for a large business. Dealers are putting their attractive grades in shape for the rush which is anticipated, and the small local yards are beginning to bestir themselves in a replenishing way. The mills are very busy getting stock in shape for the market. In fact, they are in some cases over driven, as they are working on orders extending into the fall months. All classes of stock are being more firmly held, especially the nicer grades. Hard woods are much sought for, and find a ready market. To use the expression of a prominent dealer, they are able to sell themselves as soon as they show up. Buyers, although taking hold pretty well, still evince a desire in some case to talk down prices, but dealers are firm and will probably continue so as long at least as the demand remains sufficient to keep accumulations within reasonable bounds. The movement in western pine has been good during the week, and eastern has exhibited considerable activity. Prices remain as before.—*Journal of Commerce.*

CANADA PINE.

Selects, Dressed	$45 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
do do 2nds	33 00@35 00
Dressed Shippers	27 00@30 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	31 00@35 00

Bay City.

The *Lumberman's Gazette* of May 9th says:—The market has been more active the past week, and large amount of lumber has changed hands, one party reporting sales amounting to six million feet. Numerous other sales are reported and the entire sales would aggregate a handsome figure. Nearly all has been sold at market rates, although sales of ordinary stock have been made at $6.50, $13 and $30, which is somewhat under the market—$7.50, $15 and $35 being the figures for good stock. At these figures the most of the stock sold the past week has changed hands. There is a disposition among some holders of course stock to accept $6.50, $13 and $30 as the ruling rates.

Navigation is fairly open and a good deal of lumber has been shipped—perhaps 10,000,000 feet. All the barges on the river are loading and will, no doubt, be actively employed for the season. Freight rates at present are $3@$3.25 to Buffalo and Tonawanda, and $2.50@$2.75 to Chicago and Ohio ports, the outside figures being from the up-river ports.

Shingles are in active request at $1.90@$2.10 for clear butts, and $2.90@$3.25 for XXX. The mills are starting up, and the supply will be more liberal in the near future.

The saw mills are about all in operation and

well supplied with logs. An offer of $9 per M for 6,000,000 feet of pine logs was refused on Friday, which shows the prevailing confidence in the future of the market.

General quotations here are :—

Shipping culls	$ 6 75@ 8 00
Common	13 50@18 00
Three uppers	32 00@38 00

St. Louis.

The chief interest is centered about the accessible supply of dry lumber which is, all told, but limited, and the comparatively little in market is not nearly all available. Fully 45,000,000 feet are tied up by the floods, and large quantities besides are endangered by the still rising waters. In East St. Louis a large number of car loads are standing inaccessible; the railways being submerged, and the cars unapproachable by the ferryboats.

Buffalo.

We quote cargo lots :

Uppers	$35 00@40 00
Common	16 00@19 00
Culls	11 00@12 00
Dressing stocks	18 00@20 00
Dressing sidings,	17 00@19 00

Tonawanda.

CARGO LOTS—MICHIGAN INSPECTION.

Three uppers	$38 00@40 00
Common	17 50@19 50
Culls	15 00@17 00

London.

The *Timber Trades Journal* of April 16th says :—Buyers in London, who look to the sales only, are not supposed to trouble their heads about what goes on abroad. Whenever their business takes them through the docks they generally find them pretty full of all descriptions, and it matters little to them what fine plans the Swedes have for augmenting the supplies by further developing the resources of their country. They can rely pretty safely under any circumstances on London never running short of anything, and the same post that gives them the information that stocks abroad are short brings them a voluminous catalogue offering almost every description of timber and deals in suitable parcels which they can pretty safely rely on obtaining far cheaper than they could import. It is hard, therefore, to convince them that prices will improve as stocks diminish. while cargo after cargo that arrives is put up under the hammer that seldom leaves enough to the seller to cover the cost and freight.

It is true, nevertheless, that some classes of goods hold their own pretty well. The stocks of flooring at the close of the shipping season were heavily in excess of any previous year, and if a great come-down were likely, these were the goods upon which the effect would be most severely felt, but the demand has been exceptionally strong for this class of wood throughout the dead season ; consequently the spring prices are holding up—in fact, in most of the European stocks values seem steady to what they were in the spring of 1878.

Liverpool.

The *Timber Trades Journal* of April 16th says :—It is gratifying to be able to report that more business is being done than has been the case for such a long time past that we hope this improvement will be permanent, seeing that with the change of weather builders will now be able to proceed vigorously with their contracts.

At the same time there is plenty of room for a better demand, for the present rate of consumption makes but little impression upon our heavy stocks. It will be noticed from the stock list given last week that we have nearly double the quantity of yellow pine on hand compared with this time last year, or nearly twelve months' consumption at the rate of last March, and of pine deals we have also an excessive stock for the time of year ; this, however, is not a great drawback, as these goods are growing in favor with consumers from year to year, although it, of course, lessens the demand for log timber.

DYSPEPSIA.—Strenthen your digestion—tone the stomach for utilizing and assimilating every atom of food you take; the body needs it for strength and vigor. *Zopesa* cleanses the entire system, stimulates the Liver, keeps you regular, and able to eat ten-penny nails. Letters and postal cards come in daily, telling of cures and help from *Zopesa*, from Brazil. *Positive proof* of the health and vigor it gives in a ten cent sample. Ask your druggist.

Glasgow.

The *Timber Trades Journal* of April 16th says : The imports to note during last week are one cargo of pitch pine timber and parcels of staves and walnut, &c.

One public sale has been held, result of which is detailed below.

Apart from inferences which may fairly be drawn from the auction sales, it is at the same time to be borne in mind that important consumers, a good many being ship-boilder, buy as a rule privately. In this way large quantities, especially of pitch pine, have been going into consumption. The quarter's consumption of Quebec Yellow pine timber has been large, say 5,800 loads, but of waney boardwood and of red pine the amount consumed has been comparatively small. Of oak and birch timber the quarter's consumption amounts to 2,500 loads and 460 loads respectively, of Quebec staves, pipe and puncheon, 80 mille.

AUCTION SALE.

On the 12th of April, at Port Glasgow, Messrs. Hunter, Sheriff & Co., brokers :—

Quebec waney boardwood, 65 c. ft. av. per log, 2s. 6d. c. ft.
Do., 48 c. ft. av. per log, 2s. 3½d. c. ft.
Do., prime square boardwood, 45 c. ft. av. per log, 2s. 3d, c, ft.
Do., yellow pine deck-wood, 70 c. ft. av. per log, 1s. 10d. c. ft.
Do. beam fillings, 26 c. ft. av. per log, 1s. 2½d. c, ft.
Do. red pine, 35 c. ft. av. per log, 1s. 6½d. c. ft.
Do., 30 c. ft. av. per log, 1s. 6½d. c. ft.
Do. red oak, 35 c. ft. av. per log, 1s. 2d. c. ft.
Do. white oak, 58 c. ft. av. per log, 2s. 5d. c. ft.
Sawn pitch pine, 55 pieces, 500 ft., 1s. 3¾d. c. ft,
Quebec 1st yellow pine deals—

12 ft. 11×3	2s.	per cub. ft.
11 " 7/23×3	2s. 2d.	"
12/13 " 7×3	2s.	"
Do. 3rd— 15 " 7/11×3	1s. 1½d	"
14 " 7/18×3	1s. 1½d.	"
13 " 11×3	1s. 1d.	"
13 " 7/11×3	1s. 1d.	"

Pitch pine planks, 10 to 25 ft. 9/14×3, 1s. 2¼d. "

Leith.

Messrs. Brownlee & Co. held a sale on Tuesday in Springfield street, of American timber, deals, battens, etc. There was a fair attendanee, but buyers seemed to confine themselves to small purchases. The square yellow pine, which was of fine quality, fetched very good prices, ranging from 2s. 2½d. to 2s. 9d., the average being about 2s. 6½d. Quebec birch was not in demand ; indeed nothing else was to be expected, seeing the large quantities that have been thrown on the market at late sales held here, though the descriptions previously offered were of inferior quality. The following is a note of prices realized :—Square yellow pine, 2s. 2½d. to 2s. 9d. per cubic ft. Ash, 2s. 4d. to 2s. 9d. per cubic ft. American red pine, 19d. per cubic ft. First yellow pine deals, 2s. 9d. per cubic ft. Third yellow pine deals, 13⅓d. per cubic ft. ; 9x4 red deals, 3d. per lin. ft.; 6½ white battens 1 4-16d. per lin. ft.

Irish Markets.

DUBLIN.—The *Irish Times* says that there has been a considerable increase in the demand during the week, and there seems every probability that as the season advances there will be a great revival in the timber trade. Prices, however, have not altered, as stocks are at present heavier than usual at this period of the year. The following are the latest quotations :

St. John and Miramichi deals	£14 10s@00
1st Quebec deals	£19@22
2nd do	£14 10s@15
3rd do	£13 10s@00
4th do	£13
1st Pine deals	£40@50
2nd do	£30@37 10
3rd do	£20@22
White Norway flooring	10s
Oak	£7
Ash	90s
Elm	90s
Birch	85s@90
Red pine	75s@80
Yellow pine	85s@100
Board pine	100s
Pitch, Memel, full sized	60s@80
do under sized	50s@60
Pipe staves	£90

ZOPESA.—A healthy man never thinks of his stomach. The dyspeptic thinks of nothing else. Indigestion is a constant reminder. The wise man who finds himself suffering will spend a few cents for a bottle of *Zopesa*, from Brazil, the new and remarkable compound for clensing and toning the system, for assisting the Digestive apparatus and the Liver to properly perform their duties in assimilating food. Get a 10 cent sample of *Zopesa*, the new remedy, of your druggist. A few doses will surprise you.

For all purposes of a Family Medicine, HAGYARD'S YELLOW OIL is at the head of the list. It is used with unprecedented success, both internally and externally. It cures Sore Throat, Burns, Scalds, Frost Bites, relieves, and often cures Asthma.

Wrought Iron Shanty Cook Stoves

The Best Article ever offered to the Trade.

I have much pleasure in drawing attention to my **WROUGHT IRON COOKING STOVE, for Shanty, Hotel and Boarding House use.** These Stoves are made of **Heavy Sheet Iron**, the top and lining of the fire-box being of **Heauy Cast Metal** and all the connecting parts of substantial **Wrought Iron Work.** The dimensions of these Stoves are as follows :—

SINGLE OVEN STOVE

Top surface contains six 10-inch holes, with ample room between, and one oven 16 x 21 x 26.

DOUBLE OVEN STOVE

The Double Oven has a top surface containing twelve 10-inch pot holes, with two ovens, each 16 x 24 x 26. One fire-box of suitable size for area to be heated. Below will be found Testimonials from some of the leading Lumbermen, who have used my Wrought Iron Cook Stoves since I ommenced manufacturing them. They are the names of gentlemen who are well known and eliable, and will carry more weight than any recommendation of my own could do.

The Best Stove I have ever Used.

PETERBOROUGH, May 31, 1880.

ADAM HALL, Esq., Peterborough. Dear Sir,—I have used your Wrought Iron Cooking Stove in our lumbering operations since its introduction here, and have no hesitation in saying that I prefer it to any other. For durability, economy and efficiency, where a large number of men are employed, it is the best stove I have ever used. You can, with confidence, offer it to hotels, boarding houses and lumbermen.

Yours truly, THOS. GEO. HAZLITT.

The Stove for Lumbermen.

PETERBOROUGH, June 1st, 1880.

ADAM HALL, Esq., Peterborough. My Dear Sir,—We have used your Wrought Iron Cooking Stove and find it is very satisfactory for lumber operations, especially so on drives. We can recommend it highly.

Yours truly, IRWIN & BOYD,

Gives the Greatest Satisfaction.

PETERBOROUGH, June 3rd, 1880.

A. HALL, Peterborough. Dear Sir,—I have had the Wrought Iron Cook Stove, purchased from you, in constant use ever since last fall, and it gives the greatest satisfaction in every respect. I can recommend them highly to any one who is in the lumber business. Very truly yours, GEO. HILLIARD, M.P.

EVERY STOVE GUARANTEED

All the necessary TINWARE and CUTLERY for Shanties supplied at the Lowest Prices.

ADAM HALL, Peterborough.

KERR BROS.

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The Abel Edward's Centennial Turbine Water Wheel.

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Water-works, the latest and most improved, made to Order.

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Plans and Specifications on application.

The Walkerville Foundry

AND

MACHINE WORKS.

Walkerville, Ont., Dec., 1880. b15

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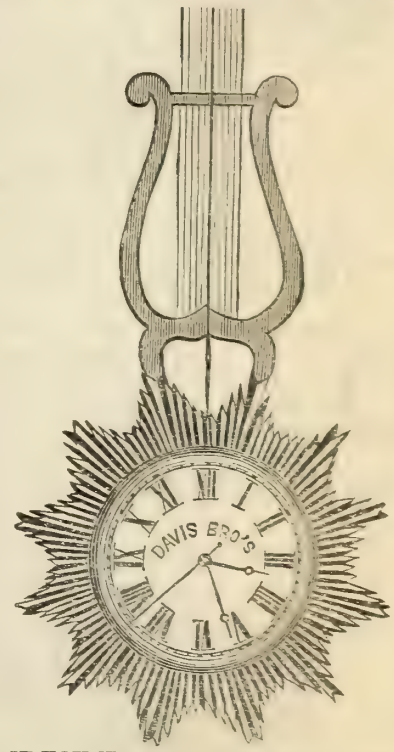
CLUTHE'S PATENT SPIRAL TRUSS all attachments improved. No more buckles, all on solid brass casting. Book on rupture and human frame free. Send address in full post card. Best true information about rupture and deformities. CHAS. CLUTHE, Surgical Machinist, 118½ King Street west, Toronto. 12n13

SUN CLOCK



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M. Covel's Latest Improved Automatic Saw Sharpener!

Is the Most Perfect Machine that has ever been Introduced into Mills for that purpose.

CIRCULAR SAW STEAM FEED!

I would also call special attention to my

Heavy Circular Saw Mills

and for STEAM MILLS, would recommend the Steam Feed, having put in several which are giving the best of satisfaction, as will be seen by the following testimonials:—

GRAVENHURST, August 20th, 1880.

WM. HAMILTON, ESQ., Peterborough.

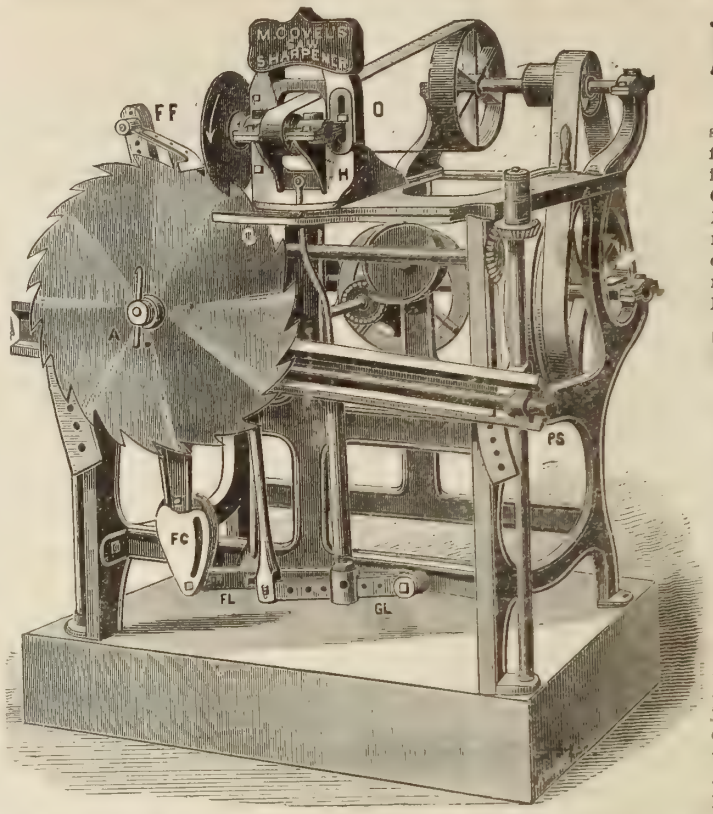
DEAR SIR—I have used your Steam Feed for near four months, and it has given me perfect satisfaction in every way; it is admitted by every person who has seen it work to be the best feed ever invented. Since I put it into my mill, I have not lost ten minutes time fixing anything belonging to it. I can cut 18 boards 13 ft. long in one minute. It can do much smoother and better work than the pinion feed. It is easily governed and reverses the carriages instantly. I am thoroughly satisfied with it and can recommend it to any person who has a Circular Saw Mill for cutting long or short logs. I consider I have cut more lumber than will pay for the Steam Feed since I got it than I would have cut had I not put it in.

Yours respectfully,
WILLIAM TAIT,
Lumberman, Gravenhurst.

TORONTO, August 11th, 1880.

WM. HAMILTON, Peterborough, Ont.

DEAR SIR—The Steam Feed you put in is working splendidly. Yours, &c.,
THOMPSON, SMITH & SON.

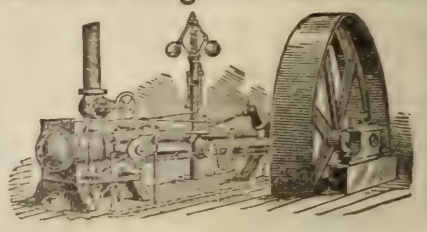


MILL MACHINERY!

I am also manufacturing Saw Mill Machinery, for all sizes of Gang or Circular Mills, Span or Double Circulars for Slabbing Small Logs. My Patent Jack Chain for drawing logs into Saw Mills, acknowledged by all to be the Cheapest and best ever got up; also, my Patent Lumber Markers, different sizes of Edgers, Gang Lath Mills, Trimmers, Power Gummers, and all Machinery used in a first class Gang or Circular Saw Mill; also, small Hand Gummers for use in the woods, for Cross-cut Saws. Rotary Pumps of different sizes, for Fire Protection in Mills, &c.

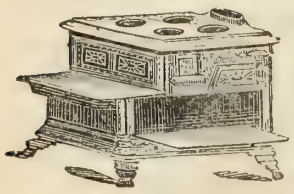
Horizontal Engines and Boilers

CORLISS ENGINES



Where economy of fuel is the great consideration, along with uniformity of speed, such as is required in Grist and Flouring Mills, Woollen and Cotton Factories, or large Factories of any kind, I supply the Corliss Engine. I feel justified in saying that our Style, Workmanship and Finish on this Engine will be no discredit to its renown, and certainly is not equalled in this country for economy of fuel. I have them working at 2½ pounds of coal per horse-power per hour. L10

WILLIAM HAMILTON - - PETERBOROUGH, ONT.



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Shingle Bands, Tinware & Household Furnishings

In Large or Small Quantities, at Wholesale Rates. 6L10

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We watch the interest of our Customers. Our stock is full of the very best goods in Scotch, English and Canadian Tweeds.

We BUY and SELL for Cash, therefore it enables us to do business on very SMALL PROFITS.

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We give a Good Tweed Suit for.....$6 00
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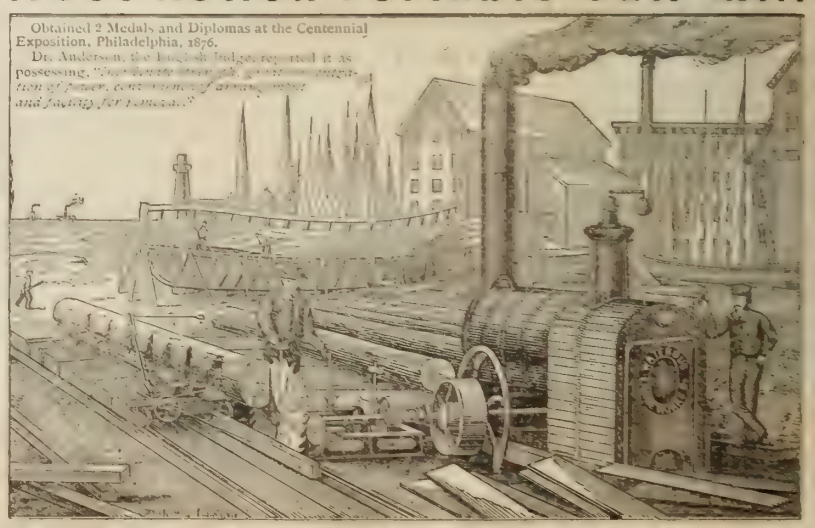

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The Bell Organs have just received the HIGHEST AWARD and SPECIAL PRIZE (Gold Medal) at the International Exhibition, Sydney, Australia, this year for their Organs over all the English and American makers. This along with the unlimited awards, prove that

THE BELL ORGANS LEAD THE WORLD!

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Medal and Diploma.....Provincial Exhibition, 1871
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Only Medal for Parlor Organ, Provincial Ex., 1878
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And Gold Medal.....at Sydney Australia, 1880
WE RECEIVED

The Bell Organ Manufactory is the Largest and Oldest in the British Empire, and the fact that we have sold nearly 15,000 proves that they are the best in the market. ☞We guarantee all our Organs for five years. Correspondence invited. Illustrated Catalogue mailed free.

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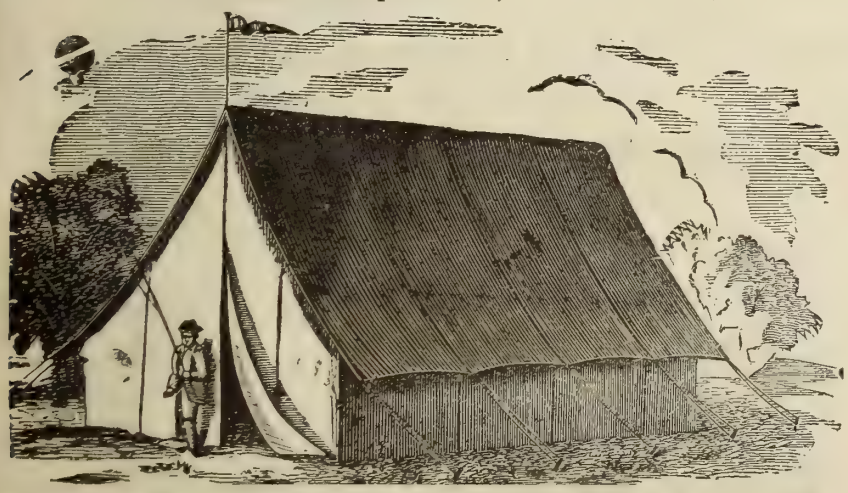
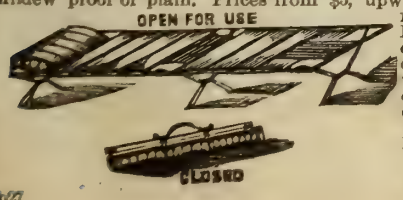


manufacturers of Tents for Lumbermen, Sportsmen, Camp Meetings, Photographers, Lawn and military Encampments, with or without extra roofs, all sizes and styles, white or fancy striped, Mildew proof or plain. Prices from $5, upwards. Flags of all descriptions, (regulation sizes) made of the best of silk-finish bunting. CAMP BEDS (Bradley's Patent) the best bed ever invented; size when folded 2 x 6 in.; 3 feet long, weighing only 11 pounds, but strong enough to bear the weight of any man. Waterproof wagon and horse-covers, tarpaulins sheets, coats and leggings of every description made to order on the premises. ☞Special rates to Lumbermen. Send for catalogue and price list to



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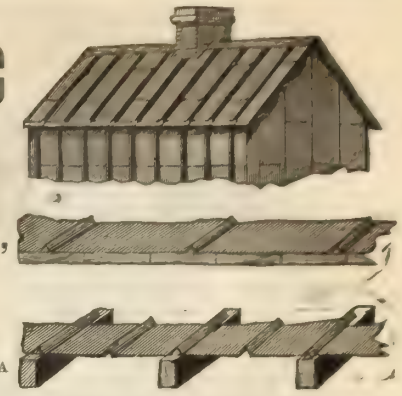
Can give the Best of References in every State and Territory.



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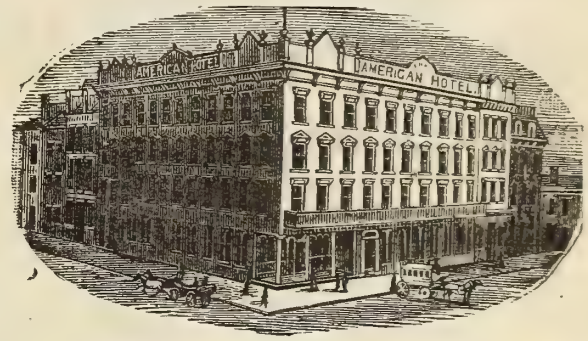

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Shanty Settlements
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And everything necessary to a complete office outfit.

All Printing done in the Highest Style of the Art, and at Lowest Living Prices.

Book-Binding of every Description got up in a very Neat and Superior manner.

Account Books Ruled and Bound to any desired Pattern.

For Schedule of Prices address, describing the kind and quality of work desired,

TOKER & CO.,

"THE CANADA LUMBERMAN,"

PETERBOROUGH, ONTARIO.

This cut is a simile of Package.

The greatest tribute to its extraordinary merits is, that it was awarded First Prize and Diploma at

Toronto Exhibition, 1880.
Hamilton " "
London " "
Montreal " "
over all other yeasts.

TRY IT, AND BE CONVINCED.

Ask your Grocer for it, or send direct to the factory.
PEARL YEAST COMPANY, 39 Front Street, Toronto, Box 1264, b15

READ THIS!

Irish Canadian Office.
TORONTO, Feb. 21st, 1881.

MR. F. CRUMPTON,

Dear Sir,—The watch I purchased from you some time ago, has given perfect satisfaction, and I am much pleased with it, and can *cordially recommend* any person in need of a watch or anything in the jewelry line, to deal at your store. Yours very truly,

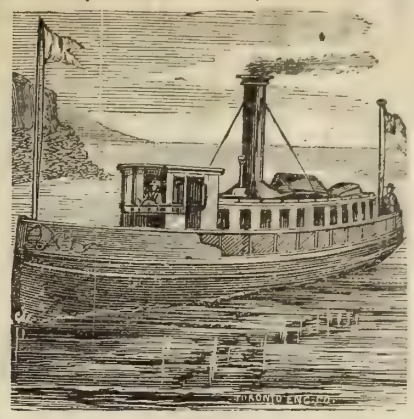
PATRICK BOYLE,
Proprietor *Irish Canadian*

Send for our new price list of Watches, Diamonds, Silverware, Jewellery, &c., sent post prepaid on application. Goods sent C. O. D. to any part of Canada. We have dozens of testimonials similar to the above, plainly showing that 83 King St. East is the place to buy your goods.

F. CRUMPTON,
83 King Street East,
TORONTO. b30

JOHN DOTY

Esplanade Street, Toronto.



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CROSS-CUT SAW!

It stands without a rival, and is the fastest cutting saw in the world. It has beaten the best Canadian and American made saws 33½ per cent in every contest. Its superiority consists of its excellent temper. It is tempered under the secret Chemical Process, which toughens and refines the steel. It gives a finer and keener cutting edge, and will hold it twice as long as any other process. We have the sole right for this process for the Dominion of Canada.

None genuine that are not like the above cut, with registered trade mark with the word "The Lance," and Maple Leaf with our name. Price $1 per foot.

CAUTION.—Beware of Counterfeits. There are inferior counterfeits on the market, which are intended to be sold at a high price upon the reputation of this saw. We will send to any address a saw exactly like any counterfeit, warranted equal in quality or no sale, at 60c. per foot. Therefore do not be humbugged into paying a first-class price for a second-class saw. A fact to bear in mind is that if the material and temper are not of the very best quality the shape of the teeth amounts nothing. A saw, like a knive, will not cut fast without it will hold a keen, cutting edge. We have cut off a 14-inch sound basswood log in eight seconds with this saw. Manufactured only by

SHURLY & DIETRICH,
Manufacturers of Saws, Plastering Trowels, Straw Knives, &c. &c.
GALT, ONTARIO. b15

The UNIVERSAL SUSPENDER.

SOME REASONS why they are the best:—

1st.—No Elastic required.
2nd.—Is slack when stooping.
3rd.—It never slips off the shoulders.
4th.—Sold at prices of common suspenders.

Manufactured by C. E. RAMAGE & CO.

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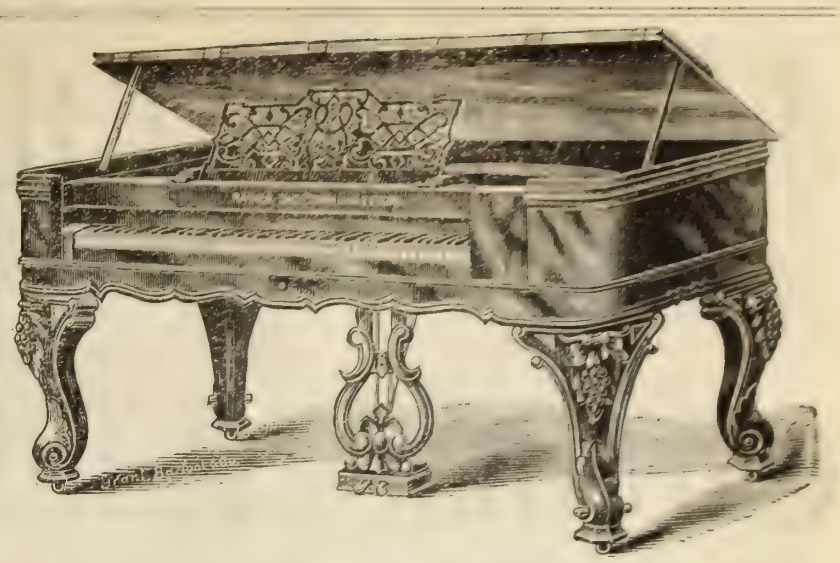

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CARRIES OFF THE HONORS OF 1880 AS FOLLOWS:

At Toronto Industrial Exhibition, 1st Prize, Diploma & Medal for Best Square Piano
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At Guelph Central Exhibition - - - - - - - 1st Prize and Diploma

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RAINER, SWEETNAM & HAZELTON,

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Specialties:

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VALVOLINE

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It leaves no Deposit, and Preserves the Metal.

These Oils are justly pronounced by Competent Judges

The Best Value in the Market!

A LARGE STOCK OF ALL KINDS OF

MACHINE OILS AT THE LOWEST POSSIBLE PRICES.

CONSTANTLY ON HAND.

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MANUFACTURERS OF PURE BARK TANNED

LEATHER BELTING

First Prize, Provincial Exhibition .....Ottawa, 1875
First Prize, Provincial Exhibition .....Hamilton, 1876
First Prize, Provincial Exhibition .....London, 1877
First Prize, Industrial Exhibition .....Toronto, 1879
First Prize, Industrial Exhibition .....Toronto, 1880
International Medal, Centennial Ex.....Philadelphia, 1876

None genuine unless with a STAR on the head of rivets. Send for Price Lists and Discounts.

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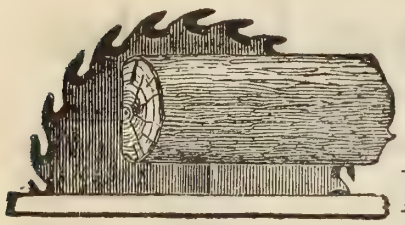
JAMES ROBERTSON & CO.

TORONTO, ONTARIO,

MANUFACTURERS OF EVERY VARIETY OF

Circular, Mill and Gang Saws



INSERTED TOOTH SAWS

A SPECIALTY.

Emerson Pattern and Lumberman's Clipper.

SAWS REPAIRED.

EVERY SAW WARRANTED.

SEND FOR PRICES. 6L13

EMERY WHEELS FOR SAW GUMMING!

Solid Emery Wheels are now almost in universal use for the purpose of gulletting and gumming saws. Statistics show from 25,000 to 30,000 saw-mills in the United States. Many of these run only a single saw each. A one-saw mill would use one or two wheels a year, costing $3 to $4 each, and when such small mills order single Emery Wheels from the factory, the express charges often equal the cost of the wheel. There was a time when the quality of Emery Wheels was so uncertain, and the demand so fickle, that storekeepers could not afford to carry them in stock. Now, however, Saw Gumming Wheels have become as staple an article as Files, and every dealer in saws, Hardware and Mill Supplies can afford to carry a few dozen standard sizes in stock. Large dealers order stocks of $500 to $750 worth at a time. Saw Gumming Wheels are used with the edge (or face) square, round, or beveled. Probably seven-eigths of all in use are beveled.

The principal sizes are:

8x¼, 8x⅜, 8x½ } ¾ in. hole. 10x¼, 10x⅜, 10x½, 10x⅝ } ⅝ in. hole. 12x¼, 12x⅜, 12x½, 12x⅝, 12x¾, 12x⅞ } ⅝, ¾, ⅞ and 1 inch. Holes,

Probably more wheels 12x⅜, 12x½ and 12x¾ are used than all the other sizes together. Saw Gumming Wheels are used, however, of all sizes up to 24x1½. The most frequent complaint is that Emery Wheels harden the saw so that a file won't touch it. The answer is that you don't want a file to touch it. An expert workman will shape and sharpen the teeth with an Emery Wheel, leaving the teeth *case hardened*, in which condition the saw will cut about 33⅓ per cent. more lumber than a soft saw will. Those who want to use the file, however, have only to touch the saw *lightly* a second time (after going all over it once), and this second touch will cut through the case-hardened scale.

A QUESTION OF QUALITY.

Thirteen years of experience as makers of, dealers in, and actual users of Emery Wheels, have led us to a decided opinion as to what quality is the best. We prefer for almost every use an "Extra Soft" wheel like the "Pocono." We believe that money lost through the rapid wear of the wheel is more than made up by the money saved on wages. As we cannot get every one to adopt our views, we make several qualities, so as to meet their views. We say to those who think they can only be satisfied with some other make of wheels (not Tanite), that we can furnish qualities *to match* any and every other make. If you have got used to some special quality of wheel, let us know what it is, and we can send you *a Tanite Wheel of similar quality*. Our *regular* classification of Saw Gumming Wheels is as follows:

CLASS 2. MEDIUM—HARD.—This Wheel is THE STANDARD Saw Gumming Wheel all over the world. Probably seven-eighths of all the Saw Gumming Wheels used are "Class 2." It cuts fast and keeps its shape well. Some think it too hard, some too soft. We prefer the "Pocono."

CLASS 3. MEDIUM—SOFT.—The same as to coarseness and fineness as "Class 2," but a *softer*, and therefor freer cutting wheel.

CLASS "POCONO." EXTRA SOFT.—This Wheel we prefer to all others. It is both *finer* in grain and softer than either of the above. As a Saw Gumming Wheel, Class "Pocono" is specially suited to those practical and experienced Sawyers who know how to grind with a light touch, and who want a free cutting wheel that will not create much heat.

Illustrated Circulars and Catalogue, showing Cuts of Saw Gumming Machines, and Shapes, Sizes and Prices of Wheels, sent free on application.

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The Tanite Co. Stroudsburg, Monroe Co. Pennsylvania

CANADIAN TRADE SPECIALLY SOLICITED.

THE CANADA LUMBERMAN

AND MILLERS' MANUFACTURERS AND MINERS GAZETTE.

PUBLISHED SEMI-MONTHLY.

The only Newspaper devoted to the Lumber and Timber Industries published in Canada.

SUBSCRIPTION $2.00 PER ANNUM.

VOL. 1. PETERBOROUGH, ONT., JUNE 1, 1881. NO. 15.

FORESTRY AND ABORICULTURE.

BEING THE FOURTH CHAPTER OF THE REPORT OF THE ONTARIO AGRICULTURAL COMMISSION.

Cultivation of Forest Trees.

The mode of cultivating forest trees is the next matter to claim attention. This may be accomplished either by raising trees from the seed, or from cuttings, or by transplanting them from the nursery or the woods.

If it be desired to raise trees from the seed, attention must be paid to the time of gathering, management, and plantiug. The soft and silver-leaved maples and elm mature their fruit in June; the sugar, Norway, sycamore, and some other maples, ripen their seeds later in the season. Acorns, walnuts, chestnuts and other nuts ripen in the fall. All seeds should be sown as soon as gathered, but the fall seeds may, if more desirable, be kept in a box mixed with sand until the following spring. Acorns and nuts being liable to be disturbed by squirrels are often preserved in this manner. They should be kept in a cool place, and where they will not become too dry. The elm and maple if favorably situated will make very good growth in their first season, when sown immediately after gathering. Red cedar berries should be bruised in March, and mixed with a quantity of wet wood ashes. In three weeks the alkali will have cut the resinous gum, when the seeds can be washed clean from the pulp and planted.

But many people will prefer a less tedious and equally cheap method of acquiring a stock of young trees. Mr. Bucke, of Ottawa, gives some useful hints on this head:—

"There has been a good deal of talk before the Commission about growing trees from the seed, but if I were going to plant trees, and particularly maples, I would go into the woods and pull up seedlings a few inches high, as I am convinced they will succeed better than by any planting of seeds. I planted a number in that way, and they are the best lot of young trees I know of. I planted them in nursery rows, about six inches apart in the row, and I have succeeded in raising a large number without losing any. I trimmed the roots before planting. There are both hard and soft maple found in the ordinary maple bush, and I think birch could be propagated in the same way."

Mr. Bucke further stated he had collected and planted elm seedlings in the same way as the maple. Seedling trees thus taken early from the bush, should be kept in the nursery rows for a couple of years and then planted out. With regard to the spruces and other coniferous trees, Mr. Leslie says:—

"There is no difficulty whatever in transplanting these trees from the woods when young; it is simply a matter of keeping the roots moist while out of the ground. I would recommend that they should always be planted in nursery rows before being permanently placed in position, and if they have ugly tap roots these should be cut off. I would not recommend that the tops should be cut, there is no necessity for doing so, and it destroys the symmetry of the tree. There is no necessity for cutting the tops of deciduous tree seedlings."

Mr, Arnold says on these points:—

"Unless trees have been prepared by transplantation, the smaller they are planted the better. They should not be over a foot high unless they have been so prepared. After they are planted I would cultivate the soil the same as for corn or potatoes. I would plant the trees at first with a view to thinning them out. As to the cost per acre, the small trees could be supplied for five dollars per hundred. The planting would be about five dollars per hundred, that is, for nurseryman's trees, about one and a half feet high. I would not recommend the planting of such small trees, but I would have them properly prepared to plant when they were two or three feet high. They would then cost about twenty dollars a hundred when planted. Some varieties of oaks, walnuts, etc., could be raised from the seed by farmers if they attended to the matter, but I find it more profitable for me to send and buy my trees one or two years old from those who make a business of raising them. The raising of forest trees from seedlings is a business by itself. It would pay better to import some from France and England than to grow them, as they have to be shaded. Young trees should be grown in a seed bed, before being planted out, about two years, and then should be re-transplanted every two years until they are put where they are to remain."

Of trees of a larger growth than seedlings in their first or second year, Mr. Roy says:—

"In transplanting trees the smaller the better. If you get a tree four or five feet high you may replant it, but my experience is that the sooner you begin to transplant the trees the better. I usually transplant fruit and other trees in the fall. The strongest and almost only reason I have for transplanting them then is that I have more time to do the work then. I think it is a good thing to cultivate around a tree. I don't think it is good to cultivate around a peach tree in a rich soil, because the tree gets too much wood in the fall, and the frost comes on and kills it before the wood hardens. As regards forest trees, I think they would succeed better for a few years if cultivated around. After they get fairly growing I don't think cultivation would be required."

Senator Allan on the replanting of forest trees remarks:—

"Take, however, even an ordinary sized farm, say of 200 acres, and if planting is to be carried on to any extent, trees from the nurseries will be found rather too expensive a luxury, and the farmer must rely upon what he can obtain from the nearest woods.

"These—if carefully transplanted, and in the case of evergreens more especially, of not too large a growth, when moved—ought to succeed perfectly, or at least there should be a very small percentage of loss.

"Of our native evergreens, the white pine, black and white spruce, and white cedar, can all be easily transplanted.

"The red or Norway pine, than which there is no handsomer tree when allowed to grow singly and with plenty of room for the spread of its branches, is very difficult to move, and will not generally succeed, unless taken up with great care when very young.

"The hemlock spruce, one of the noblest and most picturesque of our native evergreens, is of very slow growth, and is also difficult to transplant, except when very young, but both it and the white cedar make most excellent hedges.

"Of our deciduous trees, the elm, ash, beech, oak, and maple, are the most generally and easily obtainable. The maple (both of the hard and soft varieties) bears transplanting remarkable well, and grows rapidly. The different varieties of elm can also be easily moved—so also the ash. The oak, both white and red, as well as other varieties, is difficult to move with safety, and is of less rapid growth than either the maple or the elm.

"The butternut, if transplanted when young, succeeds well, The walnut and sweet chestnut I have no experience of, except as transplanted nursery trees. Take, however, all the others I have named, both evergreen and deciduous, and they can generally be obtained in most parts of Ontario, without having to go any great distance to find them."

As the tree to be moved increases in size the more care is needed in its treatment. It is a good plan to select trees growing as near the edge of the woods as possible; their situation having been less sheltered, the exposure to which removal subjects them is less felt. As to the preparation and removal of forest trees Mr. Arnold says:—

"We prune the roots with a spade. In the case of trees which have not been transplanted, and trees, say four, five, or six feet high, which have not been moved lately, we send out a man in the spring to cut off the roots about a foot from the stem. In the fall, in digging them up you will find abundance of fibres, and unless this is done it is dangerous to remove them at that age. If people transplanting from the forest would go about this time (June) and cut off the roots a few inches from the stalk, and go next year and dig them up, they would find no difficulty. In moving trees it is better to cut off the tap roots. For instance in growing peaches it is the practice of many to put peach seeds in sand in the greenhouse until they germinate. There is a long tap root which we pinch off, and when we take it up afterwards we find a mass of fibres. In fact the tap root is not essential to the future growth of the tree. As to the branches, I would not touch them until I came to transplant. When we dig them up we have to cut off a portion of the roots, and it is necessary to take off about the same proportion of the branches. The root vessels cannot draw sap enough to supply all the leaves unless this is done. The reason I would give for pruning with a spade is, first, that it prevents injury to the root while the tree is being finally moved; second, it produces large growth of small fibrous roots within a limited space, and this adds to the nourishment of the tree."

The distances apart at which trees are planted, when set in rows for ornament, or shelter for cattle in fields, will have to be decided by the nature of the tree, and will run from ten to thirty feet, according to circumstances. For forest planting, the trees being in that case small, they may be planted from three and a half to four feet apart in each direction. This will admit of cultivation by horse power. As the trees grow they will be thinned out, any casualties, on the other hand, being supplied by new plantings.

In Dr. Hough's report the following table is given, showing the number of trees upon an acre at a given distance apart, and the number that might be left at dfferent ages, with the proportional value of the thinnings taken at the several ages:—

Age.	*Distance apart.*	*Trees to the acre.*	*Proportional value of each trimming to total trimming.*
	ft. in.		*per cent.*
10 years.....	3 9	3,097	3.4
15 "	4 0	2,792	5.2
20 "	4 3	2,411	6.5
27 "	4 7	2,077	10.5
35 "	5 6	1.440	23.6
43 "	6 6	1,031	23.7
51 "	8 0	680	27.5

In regard to the growth of woodland a high European authority remarks:—

"That, while an uncultivated woodland, taken for a long period, and counting interest and taxes, would yield almost nothing to the capital invested, it is well established that the same land, managed according to modern science, would, in the long run, yield a revenue both conspicuous and constant."

THE Fenelon Falls *Gazette* says: There is a big jam of logs in Burnt River between Johnston's Rapids and High Falls, a distance of over three miles, and a number of men were sent up early in the week to try and break it. The logs, fully 20,000 in number, belong principally to Mr. Ullyott and Mr. Boyd, and a large drive owned by Mr. R. C. Smith is detained at Kinmount, waiting for the obstruction below to be removed. The logs in the jam are fortunately not piled on each other, and a "flat jam," as it is called, is generally neither very difficult nor dangerous to start.

MUSKOKA.

Our correspondent, writing from Gravenhurst, the lumber capital of Muskoka, sends the following items :—

THE QUEEN'S BIRTHDAY.

MAY 24.—To-day, the anniversary of the birth of our Most Gracious Sovereign, the Queen, is being loyally spent by the people of Gravenhurst. The saw mills are not all shut down, although several of the working men are absent on leave for the day—some of them on a grand excursion up the Muskoka Lakes on the steamer *Nipissing*, and others south by the Northern Railway to see the great lacrosse match and games there.

THE MUSKOKA SLIDE, DAM, AND BOOM CO.

who have charge of the driving of logs, square timber, and shingle bolts this season, are getting ahead with the work remarkably well, notwithstanding the low water. The company was incorporated last winter for the purpose of acquiring, constructing and maintaining dams, slides, piers, booms, and all the other works necessary to facilitate the transmission of timber down rivers and streams in the district of Muskoka, and Parry Sound, and Nipissing, and in the County of Peterborough ; and for the purpose of blasting rocks and otherwise improving the navigation of such rivers and streams, and to operate the same for TEN years.

$50,000 CAPITAL STOCK.

The capital stock of the company, $50,000, is taken up by H. H. Cook, Richard Power, J. M. Dollar, G. W. Taylor, A. P. Cockburn, A. McKenzie, Chas. Mickle, Robt. Dollar, and Isaac Cockburn. The rates charged on saw logs per 1,000 feet, board measure, including sorting at the mouth of Muskoka River and at Georgian Bay are, from Muskoka to Georgian Bay, fifty cents ; to Gravenhurst, thirty cents. From Port Sydney to Georgian Bay, sixty cents ; to Gravenhurst, thirty-five cents. From Lake Vernon to Georgian Bay, fifty-five cents ; to Gravenhurst, forty cents, and so on from other points, making a difference of from fifteen to twenty-five cents in the cost of delivery per 1,000 feet, between Gravenhurst and Georgian Bay.

MOVE TO GEORGIAN BAY.

In view of the greater facilities for shipping, several of the mill owners around Gravenhurst are seriously contemplating removing their mills to the shore of the Georgian Bay. They think they could soon save as much in freight as would pay for the cost of removal. Complaints, loud and deep, are heard all around in reference to the exactions of the Northern Railway in rigidly adhering to the rule of 6,000 feet of green lumber and 7,500 feet of dry lumber for a car load. They complain of the great want of shipping accommodation and the present monopoly.

OUTLET BY KIRKFIELD.

There is a strong hope that a third rail will be laid on the Toronto and Nipissing Railway as far north as Kirkfield this summer, and that the road from that point will be extended to Gravenhurst forthwith, there to connect with the Ontario and Sault Ste. Marie Railway, about to be constructed. This would give a direct route from the North-West, either to Toronto or Port Hope ; and to Peterborough and Belleville as well, when the "missing link" at Omemee is supplied. Should this very probable railway extension be carried out, there will be no necessity for Gravenhurst mill owners to pull up stakes for the Georgian Bay.

MUSKOKA AND NIPISSING NAVIGATION CO.

This season the Muskoka and Nipissing Navigation Co., of which A. P. Cockburn, Esq., M. P., is manager, expect to tow about eighty million feet of logs, square timber, and shingle bolts, equal to about twenty million feet. A large proportion of the stock comes to Gravenhurst, which shows the importance of this place as a lumbering centre.

SHIPBUILDING AND LAUNCHES.

Yesterday Mr. Cockburn launched the harbor tug *Lake Joseph*, a trim craft of about 20 horse power, fitted with upper cabin for passenger traffic. On the 7th of this month the same company launched the *Muskoka*, a powerful tug of 100 horse power. The engines are made by Mr. Doty, of Toronto, and work like a charm. A local paper says :—"The *Muskoka* is built in the most substantial manner, of the best white oak, and, it is thought, will be good for twenty years' actual service. Her proportions are: length over all, 84 ft.; 18 ft. beam, with 7 feet hold. She has two powerful engines, 12×14 each, attached to two large screws, so it will be seen that her propelling power is immense. Her boiler weighs 11 tons, and is built to carry 100 pounds of steam constantly. She has nicely appointed cabins, both on deck and below, and is provided with all the latest improvements in the way of machinery, pumps, hose, etc." The new steamer *Inter-Ocean* was launched on Lake Nipissing last week, and is expected to be making regular trips early in June. So it is that this new country of ours is opening up, specially under the auspices of the lumbermen and their requirements.

WEST GRAVENHURST.

At West Gravenhurst, which is built on an arm of the bay enclosed by "The Narrows," several saw mills are built. The Woodstock Lumber Co. are adding to their former lumber, lath and shingle mill, a gang of saws, which commenced work to-day, the first in Muskoka. The gang is "the improved oscillating," and is expected to do excellent work. This company will cut six million feet this season. The bulk of their logs have reached Port Carling. The mill has capacity of 45,000 feet of lumber daily, 40,000 shingles, with proportions of lath, and 32 men are employed.

ANOTHER GANG.

Mr. W. G. Taylor is putting in a gang of saws in his mill, and is making considerable additions and improvements to overtake the summer's work. He has a large quantity of last season's stock on hand, not shipped, and will soon be crowded for piling room if it is not removed.

SHINGLE MILLS.

Mr. Bartholomew is leading the local business. His stock is in logs and bolts. Mr. Archie Brydon has a shingle mill near Mr. Taylor's saw mills. He is to try a new plan of cutting shingles with "the Excelsior Knife," (Goldie's patent) and will cut about six million. It is not certain yet how this will work. Mr. Brydon is manufacturing for Messrs. Thompson & Baker, of Hamilton, who supply the raw material. Mr. Hull is rigging up the mill lately occupied as a shingle mill by Thompson & Baker near the old steamboat wharf. He will cut lumber and shingles, and has another mill near Lethbridge, about four miles from Gravenhurst. Between the two mills he will cut about 5½ million feet of lumber this season.

WILLIAM TAIT'S MILL.

Mr. Wm. Tait, whose mill was burned down recently, has it rebuilt and nearly ready to commence sawing. He speaks highly of the promptitude shown by Mr. Hamilton, of Peterborough, and Mr. R. Brammer, of Orillia, in supplying machinery ordered according to agreement, but has been greatly delayed with other foundry men who have not come up to time with their work. Mr. Tate has a stock to cut of five million feet.

ALMOST A CONFLAGRATION.

Mr. Chas. Meikle had a narrow escape of the destruction of his mill by fire yesterday. It originated near the boiler, but was promptly extinguished by the men and neighbors without much damage being done to the building. Mr. Meikle will cut five million feet this season. He has made various important changes in his mill this spring, viz.: Slab cutter, carriers, new friction feed works, etc. The season's cut will be about 4½ million feet. The logs were taken out from seven townships.

AT MUSKOKA WHARF.

Mr. Thos. Boom's gang of men are engaged in putting Burton Bro's. square timber in shipping order, previous to being sent by rail to be rafted in Toronto and thence to Quebec. The men stand in the water and saw off the ends with cross-cut saws. The fragments of bark on waney sticks are carefully stripped of with draw-knives. Burton Bros. will have about 100,000 feet at this wharf when it all arrives—only about 25,000 feet have reached so far.

TASKAR'S MILL.

This is an excellent country mill about five miles from Gravenhurst. Mr. Tasker will cut about three million feet this season. He has nearly a million of old stock on hand not drawn, but purchased by Christie, Kerr & Co., Toronto.

THE BRITISH LUMBER CO.

This extensive company have taken out about 22 million feet of logs in Muskoka this season, and have got them all in the stream, except a small quantity in Brunel.

IN LOW WATER.

The section of country north of Huntsville traversed by Little East River seems to be the driest in this northern region. The Georgian Bay Co. has one million feet on this river which will not likely be got out this season. Mr. R. Power and the Muskoka Lumber Co. have also about one million feet on this same river which will probably not be floated, and it is said that Messrs. Cook Bros. have abandoned 350 pieces of square timber on Fisher's Creek, north of Huntsville, and unless heavy rains come on they will also have to hang up one million feet of logs.

THE MIDLAND MILLS.

J. M. Dollar has on the way 150,000 feet of square timber and 4,000,000 feet of logs, all afloat. He has 2,000,000 feet left over from last season.

COCKBURN'S MILL.

Mr. Isaac Cockburn is running this mill again. The cut this forenoon was 16,000 feet.

ST. JOHN, N.B.

From Our Own Correspondent.

STREAM DRIVING.—Up to a recent date, much uneasiness was felt with reference to the prospect of bringing the logs out of the streams for want of sufficient water, owing to the protracted cold and dry weather, but during the last two weeks we have had a liberal rain fall, and the stream driving, in consequence, is reported from all quarters as being very good. The prospect now is that the bulk of the logs in the streams will be got to market in good season.

SHIPPING.—A large supply of tonnage is now in port, and, as is frequently the case in such circumstances, shippers are much annoyed and inconvenienced by the "strikes" among the laborers. The wages of ship-laborers have advanced to $2.50 per day, and it is said they intend demanding $3.00 after the present week. The following is a list of the ships in port, with their tonnage and destination :—

Belle O'Brien, 1,902, Liverpool.
Lady Dufferin, 989, Penaith Roads.
British Queen, 1,195, United Kingdom.
Harold, 189, East Coast of Ireland.
Minnie Burrill, 1,440, Liverpool.
Coronet, 869, Liverpool or Bristol Channel.
Herbert Beech, 1,061, Belfast.
Arcadia, 788, Liverpool.
Prinds' Oscar, 662, Great Britain or Continent.
Ailsa, 454, East Coast of Ireland.
Annie Burrill, 897, Dublin.
Anna P. Odell, 380, Dundalk.
Grace E. Cann, 683, Belfast.
Belstane, 1,071, Liverpool or Bristol Channel.
Riverside, 1,234, Liverpool.
St. Julien, 1,049, Belfast or W. C. England.
Vestolinden, 459, E. C. Ireland.
Hafosfjord, 495, E. C. I. or B. Channel.
Prodomo, 477, Cork Quay.
Austria, 1,000, Liverpool or Bristol Channel.
E. Sutton, 545, Penaith Roads.
Equator, 1,272, Liverpool or B. Channel.
Jothington, S.S., 1,290, Liverpool or B. Channel.
Kate F. Troop, 1,100, Belfast or W. C. England.
Lizzie Burrill, 1,185, Liverpool.
David Anterson, 256, Jersey.
Maud Scammell, 593, E.C. Ireland.
Theobald, 981, Liverpool.
Deanfield, 1,072, Liverpool.
Sarah B. Cann, 707, Bordeaux.
Berlin, 757, United Kingdom.
Whitburn, S.S., 816, Liverpool or B. Channel.

FREIGHTS.—There has been very little done in chartering since the date of our last report. Two steamers were taken for Liverpool at 55/.

SHIPMENTS.—The shipments of deals and other sawn lumber have been as follows :—

For Europe	7,549,000	Sup. ft.
" United States	2,121,000	"
" West Indies	464,000	"

St. John, N.B., May 21st, 1881.

THE DRIVES SAFE.—The news from up the Ottawa indicates that all difficulties said to be in the way of this season's drive are at an end, and that the logs in all streams will come down without serious trouble. Even in localities where the outlook was the worst, the opinion now is that there will be abundance of water even if there should be no more rain for a time. The water in the Ottawa has been steadily rising for some days, and is now considerably higher than was expected a week ago.

MIDLAND.

From Our Own Correspondent.

The British Canadian Lumber and Timber Company's mill has been running for over three weeks and is doing good work, cutting about 130 M. in the twenty-four hours. They also have a mill at Old Fort, with a capacity of about 25 M. per day. With the two they expect to cut over twenty millions this season. Their tug has been busy towing since the opening of navigation, and is expected in to-night with a tow of 100 M. cubic feet of board pine from Shawinaga River, to be shipped over the Midland to Port Hope for Quebec, the property of J. M. Dollar, the first timber shipped from here this season. The Chew Bros. have moved and rebuilt their mill and have added much to its capacity. They had steam up yesterday and will start to cut to-morrow. They will cut out five million feet. Mr. William Chew was badly hurt the other day by falling with a scaffold from the mill. Chew & Weeks are also running their shingle mill. J. M. Dollar's mill has been running about two weeks, and is now running night and day, cutting 65 M. per twenty-four hours. He will cut out over six million feet. They all have plenty of logs on hand to keep the mills running until the drives come in. The weather has been very warm and dry here.

Midland, May 26th, 1881.

FORESTRY.

The Montreal *Star* publishes the following letter :—

SIR,—The State of New York allows a certain sum of money to the owners of property who plant trees, in front of such property, on the public highway. This is something that the law makers of this Province or of the Dominion might condescend to consider. We all cry out that our forests are being denuded of timber, but our legislators look calmly on. In Ontario it is said that in the older settled counties there is only one acre of timber to every hundred that has been cleared, and how we stand in Quebec I do not know. In any case it is time to seriously consider the situation, for the best authorities in the country tell us that in a few years timber will be as valuable and as scarce here as it is in some countries in Europe. I have some experience in planting walnut, chestnut and sweet hickory, and in all cases they have yielded a profitable return. Apart from the shades and home like appearance of trees on a farm, we must not forget the important meteorological effect trees have upon the atmosphere. I cannot give you a better illustration of this than what I have read lately about the town of Valencia in South America. The town is situated a mile and-a-half from a lake. Years ago this lake was surrounded by a dense forest. The people cut down the forest, and the waters of the lake *receded four miles and a-half in thirty years.* This was because of less rain-fall in consequence of the loss of the trees. The people seeing this, planted new trees, and in *twenty-two years the lake had assumed its original dimensions.* And this was all owing to the fact of the less trees the less rain, and *vice versa.* Now, as rain is just as necessary as sunshine to produce a good crop, it becomes a serious matter for the farmer to guard the forests and thus protect himself by securing a better chance of rainfall than could be the case if the land was bare of timber.

Encouraging Guarantee.

THE CANADA LUMBERMAN, a semi-monthly publication started recently by Mr. A. Begg, has passed into the hands of Toker & Co., of Peterborough, publishers of the REVIEW. We have received their first number, a neatly printed paper of sixteen pages. The important interest to which it purposes to give special attention will find this publication well worthy of hearty support, and from the ability and experience of its publishers a valuable and interesting journal may be looked for. We wish them abundant success in their enterprise.—*Lindsay Post.*

MR. H. H. SMITH has made a contract with the owners of the prop. *Arawa* and her consorts for the carrying of 8,000,000 feet of lumber from Lake Superior to Buffalo at $3.15 per thousand delivered on the rail.

Trade Notes.

American.

AT Stevens' Point, Wis., business "continues good."

TRADE is very brisk at Keokuk, Iowa, and prices are firm.

RATES of freight from Buffalo eastward by canal are quoted at $2.70 per 1,000 to Albany.

FROM Davenport, Iowa, trade is reported fair, while the demand for dry lumber is reported "fully equal to the supply."

A LARGE quantity of dimension timber, taken out by A. & P. White, is being cut into railway ties for the English market at Pembroke. This is a new departure.

THE dealers at Michigan City, Ind., report that they have plenty of orders on their books. Collections are good and everything promises a good season's business.

TRADE is said to be in a prosperous condition with firm prices at Philadelphia, Pa. There is an active demand from both city and country customers, with increased sales as compared with several preceeding years.

THE rate for lumber from Toronto to Oswego is quoted firm at $1.25, although we have heard it rumoured that a higher rate has been paid. It is also said that contracts have been declined at quotations,

AT Toledo, Ohio, trade is reported as very fair for the time of year, with every prospect of an unusually large demand from the surrounding territory, while dealers are at a loss to know how they are to replenish their stocks at present prices.

THE estimated stock of logs at Bangor, Maine, is 150,000,000 feet, consisting of spruce, hemlock, pine, cedar, etc. The drives generally are safe, while it is said "the demand is tremendous and would take twice the quantity that can be obtained."

FROM St. Louis, Mo., the report comes that prices are quite firm under a steadier demand than has been known for years, and none of the weakening of prices which is customery at this time of year is being experienced this season, and the only question asked in sending in orders is, "When can they be filled?"

THE *Northwestern Lumberman* under date of the 18th May, says: "It may be said without doing violence to the truth, that the general situation in respect to prices is more satisfactory than might have been expected. Weakness is decidedly the exception and seems to exist in fact nowhere outside of Chicago."

THE ERIE CANAL OPENED.

BUFFALO, May 17.—The locks on the eastern division of the Erie canal were officially opened at 12 o'clock last night. Up to 6 o'clock last evening about 20 boats had taken clearance papers. Most of these, and others which loaded and cleared last fall, moved down the canal during the day. The opening rates are 7 cents on wheat, 6½ cents on corn and 6 cents on flax seed to New York. Several loads of wheat were taken at the rate named. No lumber engagements were made, but the rate was understood to be $2.85 per thousand feet to Albany and 75 cents additional to New York.

A Very Respectable Appearing Paper.

THE CANADA LUMBERMAN.—The only paper published in Canada devoted to the Lumber and Timber Industries of the Dominion.—TOKER & Co., Peterborough.

The value of these industries as factors in the development of our country, should alone command for the publication cordial recognition and encouragement. It is a very respectable appearing paper of 10 four column pages; $2 per annum, $1 for 6 months.—*Canada Health Journal.*

ON Monday, May 9th, Mr. W. H. Escott, employed in Rathbun & Son's door factory, Deseronto, met with an accident that may yet prove fatal. While putting several panels through a sizing machine, by some means they got on top of the circular saw and were hurled backward. One of the pieces inflicted severe wounds on his arm, while another struck him on the chest, cutting through the clothing and making serious wounds. Inflammation has set in, and recovery is by no means certain.

NOT DONE YET.

The continent is not yet stripped of its timber, for there is a region in which the woodman's axe has never yet waked the echoes. If the Hudson Bay region be not misrepresented, the American continent may in the future draw its supply of timber from thence. The popular idea of it is that the region is given up to perpetual snow, ice, walruses and polar bears. But this is erroneous. Professor Bell, who has spent five years in exploring the Hudson Bay, gives, in glowing terms, an account of his wanderings in and about that great body of water, which, in his enthusiasm, he designates the Canadian Mediterranean. He states that Hudson Bay is in effect a thousand miles long, more than six hundred miles wide, and covers one million square miles. Instead of being, as is usually supposed, a part of the Arctic regions, its nearest shore is more southerly than London, and its farthest still remains within the north temperate zone. On the north-east coast there is little snow in winter, and little rain in summer. The tributaries of the bay are the Nelson, which discharges the waters of Lake Winnipeg; the Winnipeg, about the size of the Ottawa; the Saskatchewan 900 miles long pouring in from the west; and the Red River, coming, 500 miles from the south. All the central part of North America, from Labrador to the Rocky Mountains, drains into Hudson Bay. The largest tributary is the Nelson, about four times the size of the Ottawa at the capital; then comes the Churchill, the Big River, and the Albany. On the west side of the bay the southerly winds are the coldest that blow in the winter, and there is less snow and less intense of cold in the vicinity of York Factory and Ft. Churchill than in more southerly regions. During winter the temperature improves as one goes from Minnesota northward through Manitoba, and down the valleys to Hudson Bay, and bathing is found agreeable in July, August, and September. On the southern and western shore unlimited supplies of red and white pine, spruce, white birch, balsam, poplar, aspen, and tamarack are found. As Great Britain is now drawing her supplies from the North Sea and the Baltic, the United States may draw their timber from Hudson's Bay when the northwestern pine lands are exhausted. It will not be impossible to get the timber from the Bay, if necessity demands it. If Hudson's strait freezes over, railroads will be built into its forests or a ship canal be constructed by way of the Nelson River and Lake Winnipeg to the Mississippi River. It is all right now, about the timber. When the Saginaw river mills are silent and the salt center has been transferred to those wonderful licks on the Muskingum and Kanawa rivers, lumbering operations will be brisk on or about the 60th parallel, and there will be plenty of timber for bedsteads, cradles, tables and coffins, if we have to live in glass houses and dare not throw stones.—*Lumberman's Gazette.*

MESSRS. H. B. RATHBUN & SON'S drive of cedar, and Mr. T. P. Pearce's drive of saw logs have passed Lennon's bridge, Marmora. The late rains have helped them, as the water was low during the April drought.

HERDING LUMBER.

Judge Carey showed the greatest interest in these weird tales, and edged up to the group.

"These are curious yarns, gentlemen, but I believe them all. I had a dog once, back in Nebraska, that I kept to herd lumber."

"Beg pardon, Judge; did you say the dog herded lumber?"

"Yes, sir; cottonwood boards. We always kept a dog there to bring the lumber in at night."

Everybody now paid the closest attention, as they knew the boss was at work.

"It was this way. Cottonwood boards warp like thunder in the sun. A board would begin to hump its back about nine o'clock in the morning, and in half an hour it would turn over. By eleven it would warp the other way with the heat, and make another flop. Each time it turned it would move a couple of feet, always following the sun towards the west. The first summer I lived in Brownville over 10,000 ft. of lumber skipped out to the hills the day before I had advertised a house raisin'. I went to the county seat to attend a law-suit, and when I got back there wasn't a stick of timber left. It strayed away into the uplands. An ordinary board would climb a two-mile hill during a hot week, and when it struck the timber it would keep worming in and out among the trees like a garter snake. Every farmer in the state had to keep shepherd dogs to follow his lumber around the country, keep it together, and show where it was in the morning. We didn't need any flumes there for lumber. We sawed it east of the place we wanted to use it, and let it warp itself to its destination, with the men and dogs to head it off at the right time; we never lost a stick.—*Carson City Appeal.*

FINE SAW MILLS.

There are many fine saw mills in New Brunswick; there must be a number on the Miramichi, but the finest mill in the Maritime Provinces, according to the Chatham *Advance*, is that just completed at Chatham by the Hon. Wm. Muirhead to replace the one burned a few months ago. It is described as a two-gang steam mill 138 by 46, and 27 feet post, crown roof covered with asbestos; boiler-house and saw-dust kiln, 40x70 feet; engine house, 40x16 feet. The power is furnished by six boilers, arranged in two sections. Each is 35 feet long, three of them 3 feet 6, and three 3 feet diameter. A large steam chest counects with wrought iron throatpipes rivetted. The engine has double cylinders, inclined toward each other at the top, each 22 inches diameter and 2 feet stroke. The fly whnel—10 feet diameter—weighs five tons. A valve is provided by which in case of fire, volumes of steam can be blown into the building to extinguish flames. There is 1,200 feet of rubber belting used in the mill: one belt is 86 feet long, 16 inches wide, and "6-ply," another 75 feet long. The gangs are of steel, guide rods 4½ and 4¾ inches; stroke 26 inches, connecting rods 12 feet long. There are two double edgers. The most of the heavy machinery was made at the Miramichi foundry, the lighter work being prepared at Mr. Muirhead's own machine shop adjoining the mill.

Comparative Table.

SHOWING STOCK OF TIMBER AND DEALS IN LIVERPOOL ON APRIL 30TH, 1880 AND 1881, AND ALSO THE CONSUMPTION FOR THE MONTH OF APRIL, 1880 AND 1881.

	Stock, April 30th, 1881.	*Stock, April 30th, 1880.*	*Consumption for the Month of April, 1881.*	*Consumption for the Month of April, 1880.*
Quebec Square Pine	604,000 ft.	300,000 ft	134,000 ft.	92,000 ft.
" Waney Board	225,000 "	118,000 "		
St. John Pine	8,000 "	72,000 "	8,000 "	——
Other Ports Pine	56,000 "	12,000 "	——	——
Pitch Pine, hewn	563,000 "	411,000 "	146,000 "	68,000 "
" sawn	390,000 "	131,000 "	127,000 "	204,000 "
" planks	120,000 "	28,000 "	55,000 "	24,000 "
Red Pine	34,000 "	10,000 "	14,000 "	1,000 "
Dantzig, &c., Fir	111,000 "	199,000 "	33,000 "	74,000 "
Sweden and Norway Fir	9,000 "	4,500 "	——	2,000 "
Oak, Canadian	400,000 "	295,000 "	44,000 "	66,000 "
" Waggon scantling	153,000 "	——	10,000 "	——
" Baltic	70,000 "	5,000 "	2,000 "	——
Elm	32,000 "	26,000 "	5,000 "	5,000 "
Ash	4,000 "	1,000 "	3,000 "	1,500 "
Birch	118,000 "	128,000 "	22,000 "	51,000 "
Greenheart	63,000 "	112,000 "	5,000 "	20,000 "
East India Teak	13,000 "	37,000 "	1,000 "	30,000 "
Quebec Pine Deals	7,956 stds.	2,553 stds.	1,195 stds.	650 stds
" Spruce				
N.B. & N.S. Spruce Deals	17,864 "	15,264 "	5,326 "	5,695 "
Pine "	1,155 "	1,880 "		
Baltic Deals	5,494 "	2,517 "	810 "	668 "
" Boards	461 "	890 "	41 "	33 "
" Flooring Boards	3,444 "	3,529 "	575 "	1,590 "

ZOPESA.—A healthy man never thinks of his stomach. The dyspeptic thinks of nothing else. Indigestion is a constant reminder. The wise man who finds himself suffering will spend a few cents for a bottle of *Zopesa*, from Brazil, the new and remarkable compound for clensing and toning the system, for assisting the Digestive apparatus and the Liver to properly perform their duties in assimilating food. Get a 10 cent sample of *Zopesa*, the new remedy, of your druggist. A few doses will surprise you.

Caledonian Hotel,
GRAVENHURST.
JOHN SHARPS, Proprietor. This Hotel has been newly opened out, pleasantly situated on Main Street, within five minutes walk of Northern Railway station. Bar kept with best assorted Wines, Liquors and Cigars. Every attention paid to guests. Good Stabling. 1y15

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EVERY KIND IN STOCK OR MADE TO ORDER.
AWNINGS!
Any kind put up complete at Reasonable Prices, and all work warranted First-class.
Horse and Waggon Covers, Flags, &c
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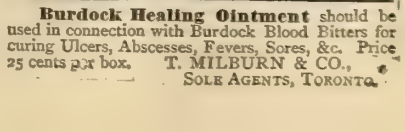

Burdock Healing Ointment should be used in connection with Burdock Blood Bitters for curing Ulcers, Abscesses, Fevers, Sores, &c. Price 25 cents per box. T. MILBURN & CO., SOLE AGENTS, TORONTO.

SHADE TREES ALONG THE HIGHWAYS.

BY THE HON. B. G. NORTHROP.

An unusual interest is shown this season in planting trees along the roadside, and our nurserymen are busy in meeting this growing demand. The Legislature of Connecticut has just passed, unanimously in both houses, a law to encourage tree-planting on the public roads. A similar law has been passed in some of the comparatively treeless states west of the Mississippi; but Connecticut is believed to be the first state east of that river to offer so liberal a bounty from the state treasury for this purpose. This Act provides that any person planting or protecting forest trees one-quarter of a mile or more along any public highway may receive for ten years an annual bounty of one dollar for each quarter of a mile so planted; the forest trees to include the elm, maple, tulip, ash, basswood, oak, black walnut and hickory; the elms to be not more than sixty feet apart.

Under the stimulus of this state bounty, more trees ought to be planted this spring along the roads of Connecticut than in any former year, however much has been recently done in this direction. In some cases individuals are encouraging this work, by offering prizes for tree-planting. A citizen of Clinton has just offered a hundred dollars, in the form of prizes of $40, $25, $20 and $15, to the persons who may plant this spring the best and longest rows of trees along any public roads of that town, the award to be made by three non-resident experts and announced at the Agricultural Fair of Clinton, next October. Another gentleman offers a like amount, to be awarded in sums of $45, $30, and $25, for the best and longest rows of trees that may be planted this spring in the towns represented in the Falls Village Agricultural Association. Two hundred dollars offered in this way a few years ago stimulated an extraordinary interest in tree planting. I shall be most happy to co-operate with any liberal citizens who may wish to try a kindred experiment in their towns this season or next year. The time for this work is at hand, and whatever is done well this spring must be done quickly. In two or three days notices could be printed and circulated in almost any town in New England or New York. That service I will cheerfully perform for any such donor in Connecticut.

Nothing can add so much to the beauty and attractiveness of our country roads as long avenues of fine trees. One sees this illustrated in many countries in Europe, where for hundreds of miles on a stretch the road is lined with trees. With the liberal encouragement offered by this new law, no time should be lost in securing the same grand attraction to our highways. Growing on land otherwise running to waste, such trees would yield most satisfactory returns. The shade and beauty would be grateful to every traveller, but doubly so to the owner and planter, as the happy experience of hundreds of our farmers can now testify, for a good work in this direction is already well started. Having in abundance the best trees for the roadside, no class can contribute so much to the adornments of our public roads as the farmers. In portions of Germany the law formerly required every landholder to plant trees along his road frontage. Happy would it be for us if the sovereigns of our soil would each make such a law for himself.

The trees named in the Connecticut Act comprise the best roadside trees for New England and New York. The elm unites the two conditions of grace and grandeur more than any other tree. Michaux calls it "the most magnificent vegetable of the temperate zone." The Norway maple deserves a place with our fine American maples, being hardy, making rapid growth, and giving dense shade. The tulip, or common whitewood, deserves greater favor as an ornamental tree. Many fail with this tree, as with the hickory and oak, beceuse they transplant them too large. It has a deep root and should be taken from the nursery young. The owner of the largest nursery east of Syracuse said to me this week: "You will accomplish a grand result for arboriculture if you persuade the people to plant younger trees. It is a great mistake to plant big trees." Trees planted when large must be beheaded, and a tree never recovers from this unnatural process. Even the elm, however prone to assert its claim to beauty, never dévelops its full symmetry when thus maltreated. It gives you two limbs, and then, from three to six feet higher, two or three more, when you might otherwise have twenty growing out in graceful arches. No doubt the elm extends its roots into adjoining fields more than any other tree. On this account, the hickory, white ash, mountain ash, and especially the tulip, with its straight stem, that may be trimmed high, if need be, should be favorites with farmers for the roadside. Greater care should be taken to keep the roots of young trees moist and protected from the sun and drying wind till they are ready to be set.

This work of tree-planting has been cordially endorsed by the press and people of Connecticut. The editor of the Boston *Herald*, speaking of the influence of the rural improvement associations, now so numerous in Connecticut, says:—"They are doing a work which will entitle our prosperous neighboring commonwealth to the name of the Garden State.' Mr. P. M. Augur, pomologist of the Connecticut Board of Agriculture, says, in a New Haven paper: "The season for ornamental tree-planting is at hand. Allow me to second this effort to persuade every town and village in our state to organize for street ornamental tree-planting. Let the ladies, if need be, move in this matter. Let a suitable day be appointed, and every man be invited to plant trees according to a specified plan, and in the evening meet to report the day's results, and banquet at the hands of the fair sex. By so doing, we shall think more of home, town, state and country; yea, and think more of each other. And, in the distant future, many will delight, as they pass through the beautiful streets, to recount this good act of their ancestors."

In some towns an arbor day is set apart during the last of April or first week of May (sometimes "May-day") for this special work, when every citizen is invited to devote the day to public improvement or to "brushing up" each around his own frontage and residence. When every resident is thus stimulated to make his own grounds and wayside neat and attractive, the entire town becomes so inviting as to give new value to its wealth and new attractions to all its homes.—*N. Y. Independent.*

THE MISSISSIPPI FLOODS.

The *Lumberman and Manufacturer*, of Minneapolis, says that the floods in the river during the last week have amounted to an embargo on commerce of every description in the West, especially in lumber. It is hard to tell just where so much lumber has gone to as the reported shipments of last week indicate was sold. From the upper Missouri through to Chicago and down to Cairo the railroads have been damaged and suspended, while all reporting points show an advance upon last year's business, but for the week. Handling lumber on the Mississippi is almost impossible, and only such lumber as is regarded unsafe is being moved and none sold. Great damage has been done already to lumber yards along the river as well as mills, booms, etc., by the floods. These things are adding to the cost of lumber this year, and also reducing slightly the amount to be cut, both of which strengthen the market. From reports it is thought that nearly all the lumber held on the Missouri river will be lost and several millions on the Mississippi, besides the large quantity of logs which have been and are being carried away. The advance in lumber at Chicago is well maintained and it only needs a corresponding move in the Mississippi Valley to send it still higher in Michigan and Chicago. The advance has been much greater in Saginaw than in the West. Thus two years ago lumber was sold for $5, $11 and $18 which now brings $7.50, $17 and $35 there, while the advance has been about $3 on common and $5 on clears in the West.

Should Receive a Liberal Support.

We have received a copy of THE CANADA LUMBERMAN, an excellent journal devoted to the lumber and timber industries of Canada, and published by Toker & Co., Peterborough. It is very neatly printed, contains a large amount of interesting news, and should receive a liberal support,—*Winnipeg Times.*

THE BULLS AND THE BEARS.

The figth of the bulls and bears in the Chicago lumber market is becoming almost as celebrated as the regular warfare of their prototypes of the stock and gain exchanges. The contest, though an entirely bloodless one, is not lacking in interest, as well to outsiders as to the participants themselves. It usually engages the attention of a good part of the trade during the earlier weeks of the season, when, for obvious reasons the animals above mentioned are in a particularly belligerent frame of mind. It may be regarded as both a moral and physical impossibility for the representatives of the yard and mill interests in this city to dwell together in harmony at this particular time of the year. They take to fighting naturally, as if by a kind of instinct, and for a time they revel in its pleasures with as much apparent enjoyment as though the whole thing were a bit of a farce, like a Punch and Judy show. In the spring the dealer's fancy turns lightly to thoughts of sharpening up his claws, which operation he performs while indulging in pleasant anticipations of the firm grip he will thereby be enabled to get upon prices when he prepares to exert his muscular power in an effort to pull them down. And so the man with a mill, or some logs that he has arranged to have sawed by the thousand upon pretty favorable terms, gives an extra chuckle as he lets his imagination show him in advance how beautifully he will toss and gore poor bruin when he catches him with a lot of men on his pay roll with nothing to do, and undertakes to sell him the last cargo of lumber on the market. But after a month or two of hostilities both the bulls and the bears discover that there is something to live for besides war, and having worked off their surplus energy by means of their annual scrimmage, settle down to business and spend the balance of the season in making money.

To consider the matter more seriously, it may be said that this regular struggle between the two opposing interests among the lumber dealers in this market arises out of the peculiar way in which the business is transacted. That merchandise should be bought for as little and sold for as much as competition will admit of are among the first principles of business. The dealers simply control certain influences that may be brought to bear upon the prices at which they must buy their lumber, and they use them, so far as possible, to effect the purpose they naturally have in view, which is, of course, to get their stock for as little money as they can. They do not care whether the mill owner makes anything; that is his lookout, consequently the only thing they work for is to buy their lumber for the lowest prices that the sellers will accept. On the other side, the manufacturers, and those interested either directly or indirectly in the production and primary sale of lumber, have before them only one purpose—to get all they can for their property. It is no concern of theirs whether the buyer of the stock makes anything on it or not; as long as it passes out of their hands at a profit their duty is done, and their interest in it is at an end.

Notwithstanding the remarkable activity in trade during the last few weeks, we have unmistakable evidence that the battle of the boards will be fought this season as usual. Both parties to the fray are armed and equipped as their best judgment directs, and are in readiness for the struggle. Indeed, the contest has already begun. Anyone interested enough in what goes on in this market will observe that a skirmish of no small dimensions has occurred between the low-priced and high-priced elements in the trade. If we take their action as an earnest of what they both propose to do, we may safely look forward to some sharp fighting before the season gets so far advanced as to bring about harmony among the operators on both sides. The bears evidently mean to take something more than a protest against the prices the mill men seem disposed to demand for their products, and the latter, if their words and actions are to be taken as an indication of what they mean to do, are equally determined not to yield a point unless they are obliged to.

It must be conceded, we think, that the bears scored a decided victory, and if so, it is only fair that they should have the credit of it. They did not accomplish quite all they desired, which was evidently to induce the trade to postpone the issuing of a union list, and so permit them to make as low prices as they pleased. Perhaps they did not expect to attain this end, but only made the attempt as a a matter of principle. However this may be, they did establish one fact very thoroughly; namely, that they do not intend to buy their season's supply of lumber at the top of the market except as a matter of absolute necessity.

Anybody who could decide in advance whether it will become a matter of necessity for them to do so would make himself famous as a prophet, and settle a question that is puzzling a good many of the shrewdest lumbermen in the country. To successfully forcast the future of this market for the next sixty days, and be sure of hitting the nail squarely on the head, would be a good thing to do, but unfortunately, or otherwise, an impossible one. It will turn out according to the ability of one side to hold off and the other to hold on. If the dealers can keep from buying long enough, they will probably bring the manufacturers to terms, while, similarly, if the mill men can pile up enough of their lumber at the mill, and so keep it away from the market, they may force buyers to pay what they choose to ask. It might be asked what would be the result in case both should develop staying powers beyond the general expectation; but it is not a likely supposition that the enduring qualities of both sides will be exactly balanced. There are some dealers who must buy from day to day, and likewise some manufacturers who must sell; so that the market is almost certain to fluctuate, and move in either direction gradually, according to the necessities of the buyers force them to demand more lumber, or those of the manufacturers oblige them to offer more for sale.

The *Lumberman* would be very glad to give its readers a definite opinion regarding to probable course of the market, and of trade and prices generally, during the coming sixty days, but unfortunately it has none that it could recommend to them as thoroughly to be relied upon. Moreover, it has failed after a diligent search to find anyone not directly interested in one side of the question or the other, who has. Ask a dealer what he thinks of the situation, and he will tell you with all the confidence imaginable that lumber is going to be cheaper; put the same question to a man on the other side of the fence and he will assure you with the utmost gravity that, in his opinion, there is not the least reason for lumber selling any lower than it does to-day. There may be wisdom in multitude of counsel, but it is a fact, concerning which the *Lumberman* has no doubt, that the more counsel one takes in regard to the probable future of this market the less he is apt to know about it. The only thing he will find out beyond question is that one man knows no more about the matter than another, and that all, in point of fact, are in a state of profound and possibly blissful ignorance in regard to it. Perhaps the best thing we can say to those who are anxious to know something about the way the market will turn, is to recommend them to trust their own judgment and act in accordance with it. One opinion is as likely to be correct as another and to toss up a dime is probaby as good a way as any of deciding between them.—*Northwestern Lumberman.*

TIMBER NEWS.

During the week ending 7th of May inst., the undermentioned timber passed through the

DES JOACHIMS SLIDES.

	Cribs.	Pieces.
Two rafts belonging to A. & P. White...	109	5,964
One raft belonging to Thistle & Carswell.	141	3,100
One raft belonging to J. B. Klock.....	74	1,902
	324	10,466

THROUGH COULONGE SLIDES TO 16TH MAY.

	Cribs.	Pieces.
One raft belonging to J. K. Booth.....	77	1,806
One raft belonging to Robert Grant... ..	44	1,091
	121	2,897

THROUGH THE GATINEAU BOOM TO 17TH INST.

14,766 saw logs owned by G. B. Hall & Co.
5,637 " " " J. McLaren & Co,
6,748 " " " Gilmour & Co.

26,851 saw logs. And 4,871 railway ties owned by Hebron Harris.

—*Ottawa Citizen.*

THEY ALL DO IT.—Everybody uses "TEABERRY" for the teeth and breath, the newest, brightest, cosiest little toilet gem extant. Try a 5 cent sample.

GREAT FIRE AT TRENTON.

GILMOUR'S MILL DESTROYED—400 MEN OUT OF EMPLOYMENT—LOSS $150,000.

TRENTON, May 18th.—This morning at six o'clock, as the night tower was coming off work at Gilmour's mill, and the day men going on, smoke was observed coming out under the roof at the western end of the boiler room, and in about ten minutes flames and smoke were coming out in immense volumes.

Under Mr. J. F. Burr's guidance, a bucket brigade was at once organized, and the fire alarm sounded. At this point the fire was gaining headway so rapidly that the steam was blown off for fear of an explosion, and seven powerful streams were brought to play on it from the large brick tank which was kept filled by the engine in the machine shop. In spite of all this the fire spread rapidly, and soon the main body of the mill, containg the saws and other machinery, together with the engine room, was in a blaze.

About this time the steam fire engine arrived, and two more powerful streams were turned on the fire, which was now raging among the sawdust and woodwork around the saws in the southern end of the mill and gaining rapid headway. But the men at this time, fired by the knowledge that their only means of support was being cut off, rushed into the interior of the mill with buckets and axes and commenced to tear out all the machinery they could get at, and as three streams were now got to play on the inside of the mill, the men began gradually to get control of the fire, and by eight o'clock, by almost superhuman exertions, they had it completely under control, and by nine it was out.

The boiler room is almost a total loss, but the boilers, which were entirely encased in masonry are supposed to be uninjured. The engine room, which was separated from the boiler room by a stone wall, but covered by the same roof, was badly gutted, but it cannot as yet be ascertained whether the engines are damaged or not.

The main body of the mill which adjoins the engine room, was badly damaged at the southern end, where the gangs of saws are situated, and where consequently a large amount of sawdust and other combustible material was accumulated. All the sawing gear and almost all the belting was totally destroyed, but most of the small machinery in the new wing (which was built during the winter), together with the gang itself was saved; and none of the lumber piles were burned.

It is known that the mill was insured for $75,000, but whether there was any more insurance we could not ascertain; but it is believthe loss will amount to $150,000. It is impossible to ascertain as yet the true extent of the damage.

The following is a complete description of the mills and their surroundings before the fire:—

Entering the mill yard by the main entrance on Mill street, the first object of interest that attracts our attention is a large enclosure containing several well kept stables for the housing of a large number of horses, which are used in the yard.

Further on we come to the repair shops and mill, the machinery of which is operated by a twenty-five horse power engine, situated in the boiler room, at the northern end. Close to the engine is a large planer, which is cabable of planing lumber on both sides at once, and thus saving a great deal of time. Opposite this is a large circular saw for general work, and further on we come to a row of lathes, and work benches, a drilling machine, a hand saw, a huge grindstone, and last of all a gigantic planer, which is used for planing large sticks of timber for framing purposes. A number of mechanics and millwrights are employed here, work being kept up until twelve o'clock at night, for several nights in the week.

Passing out through the patternshop (where patterns for all castings required for the mill are made) we cross over to the blacksmith's shop, which is fitted up with all the necessary machinery and tools and where three blacksmiths and several men are employed. Opposite to this is the immense water tank 60 feet high. The tank proper (which has an immense capacity) is situated at the top and is filled by a large steam pump situated in the machineshop. From this tank pipes lead to different points in the yard where hose can be attached in case of fire. To the right of the tank is the general business office which is connected with the town office by telephone. At the back of this in the same building is the gasometer which is capable of making sufficient gas to keep 75 lights burning all night. This is only used in the summer season when the mill is running night and day. Opposite, and a little to the left of the gasometer is the large sawmill which is driven by two horizontal engines of 75 horse power each, the steam for which is generated in 12 large log boilers situated at the right of the engine room. The furnaces are automatically, fed with sawdust, and require very little attention. The lower storey of the mill proper is entirely taken up with wheels, belts, etc., but all the sawing on the second floor, where the gangs of saws are situated, six in number and capable of sawing 300,000 feet of lumber per day of 24 hours. At the back of the saws are the edger, slash and cutting tables, lathe machines, etc., and further on still is a new wing, 60 feet long which has just been added, and in which will be placed several new gangs of saws, and other machinery, which will greatly increase the number of men employed and the capacity of the mill.

Leaving the large mill we proceeded along the shore of the bay (passing by the neat little office of foreman, Mr. Hall) until we come to the new cedar mill, which was built last summer and is now running constantly. This mill is driven by a very powerful engine at the eastern side, and is devoted to all kinds of sawing which cannot conveniently be done in the large mill. In the upper story is placed a very large circular saw which will cut through a large log, and is used for cutting long plank, square timber, etc. To the left of this is a small gang of saws, and further back a butting table and saws for cutting the rough side off the lumber.

To the east of and adjoining the cedar mill a large shingle mill is situtated, which is driven by the engine in the cedar mill.

About 400 men were employed at the time of the fire, and were all present. We could not ascertain whether Mr. Gilmour intends to rebuild at once or not, but it is supposed that he will.—*Belleville Intelligencer.*

Cannot Fail to be of Immense Benefit.

THE CANADA LUMBERMAN.—The Lumber and Timber industries of Canada, probably the most important in the country, have at last, we are pleased to notice, secured an influential and highly creditable organ in the THE CANADA LUMBERMAN, published by Messrs. Toker & Co., at Peterborough. The LUMBERMAN was founded in Toronto last year by Mr. Alex. Begg, and came into the hands of the present publishers only a month ago. It appears in an entirely new dress and will in future be published semi-monthly, at $2.00 per annum. It has a vast field and important work before it, and under its present able management we hope to see it live and flourish. It certainly deserves the support of every one interested in the lumber trade, to which it cannot fail to be of immense benefit. —*Madoc Review.*

A Mistake.

It is a great and often fatal mistake to take repeated drastic purgatives for constipation of the bowels, they induce piles and cause debility of the bowels. Burdock Blood Bitters is a safe and perfect regulator of the bowels, arousing the torpid Liver and all the secretions to a healthy action; acting on the Kidneys, and renovating and toning the system in a most perfect manner.

Mothers who are startled at the hour of midnight by that ominous hoarse cough of your little ones, what would you not give for a prompt and certain means of relief from that dread destroyer of your children, Croup? Such a means you may have for the trifling cost of 25 cents. It is Hagyard's Yellow Oil, the great Household remedy for all inflammatory and painful diseases. Do not rest over night again without it.

DYSPEPSIA.—Strenthen your digestion—tone the stomach for utilizing and assimilating every atom of food you take; the body needs it for strength and vigor. *Zopesa* cleanses the entire system, stimulates the Liver, keeps you regular, and able to eat ten-penny nails. Letters and postal cards come in daily, telling of cures and help frem *Zopesa*, from Brazil. *Positive proof* of the health and vigor it gives in a ten cent sample. Ask your druggist.

For all purposes of a Family Medicine, HAGYARD'S YELLOW OIL is at the head of the list. It is used with unprecedented success, both internally and externally. It cures Sore Throat, Burns, Scalds, Frost Bites, relieves, and often cures Asthma.

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A COMPETENT MAN, with thorough knowledge of Tram Railways, to go to Jamaica, to take charge of the laying and keeping in order the rails and road bed of a ten mile tramway, and when not employed to make himself otherwise useful. To a first-class competent man good salary will be paid.

Address, with references and salary expected,

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BILL STUFF CUT TO ORDER.
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OSWEGO, N. Y.
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JAMES HADDEN,

MANUFACTURER OF

Shingles and Dressed Stuff.

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Two Planers for sale or exchange for a Boiler. b26

White Oak and Ash

LUMBER WANTED.

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MANUFACTURER AND WHOLESALE DEALER IN

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MILLS AND TIMBER LIMITS AT SILVER CREEK, TIAGO P. O., ONT.

Bill Stuff cut from 10 to 60 feet. Cedar Posts on hand.

Orders sent to M. BRENNEN, Tiago, P. O., will receive prompt attention b15

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Commission Lumber Dealers,

FORWARDERS,

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(PATENT)

BARREL MACHINE

One man and two boys can turn out

One Hundred and Fifty First-class Flour Barrels in Ten Hours,

made from veneered wood of two thicknesses. The inside is one solid sheet of veneer running around the barrel, making in reality one hoop from top to bottom, and in the outside thickness the grain is reversed, running up and down, finished with five hoops [illegible] wide, reversed again, making the barrel almost [illegible] thicknesses, which gives the package superior strength, tightness and durability over the ordinary hand-made flour barrels, yet with all its many advantages cost less than the old style of package. My barrel machine is arranged to make all sized packages from a large barrel down to small nail kegs, butter packages and cheese boxes. I am open to prove at any time the superior strength of my barrel. That one will stand more hardship by any actual test than one hundred of the old ordinary flour barrels. County rights for sale, and all information given by applying to

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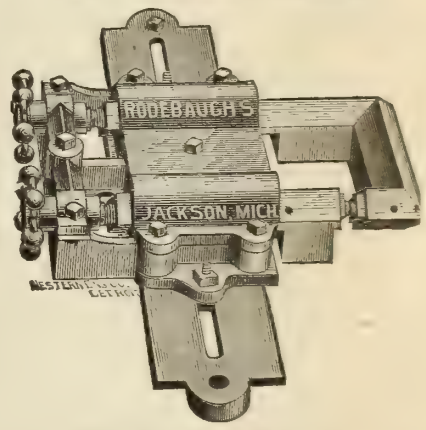

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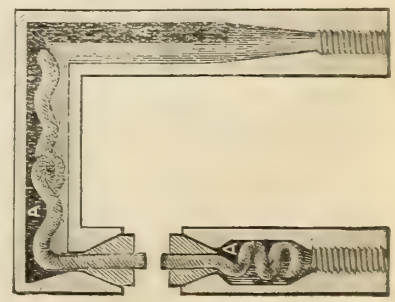

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Travelling Agent.

MR. A. L. W. BEGG has been appointed agent for the CANADA LUMBERMAN, and is authorized to collect subscriptions and grant receipts therefor and to make contracts for advertisements appearing in its columns.

The Canada Lumberman

DEVOTED TO THE LUMBER AND TIMBER INTERESTS OF THE DOMINION.

PUBLISHED SEMI-MONTHLY BY

TOKER & Co. PETERBOROUGH.

Terms of Subscription:

One copy, one year, in advance	$2 00
One copy, six months, in advance	1 00

Advertising Rates:

Per line, for one year	$0 90
Per line, for six months	50
Per line, for three months	30
Per line, for first insertion	10
Per line, for each subsequent insertion to 3 mo's.	05
Cards not occupying more than 12 lines (1 inch) per annum	8 00
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Cards not occupying more than 6 lines per annum	5 00
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Special rates will be made for page, half page and column advertisements.

Advertisements intended for insertion in any particular issue should reach the office of publication at least three clear days before the day of publication, to insure insertion.

All communications, orders and remittances should be addressed and made payable to TOKER & Co., Peterborough, Ont.

Communications intended for insertion in the CANADA LUMBERMAN, must be accompanied by the name of the writer, not necessarily for publication, but as a guarantee of good faith. Communications to insure insertion (if accepted) in the following number, should be in the hands of the publishers a week before the date of the next issue.

PETERBOROUGH, Ont. JUNE 1, 1881.

IT is said that Messrs. Irwin & Boyd's square timber, which has just passed over the Victoria railway *en route* for Quebec, is the finest lot ever shipped from that district.

IT is reported that a syndicate of Vermont buyers have purchased large quantities of lumber from an Ottawa firm at an advance of 10 per cent. over last year's prices.

WE have received the Chicago edition of that King of Lumbermens papers—*The Northwestern Lumberman*—which is in itself a very complete hand-book of the lumber trade of that city. It extends to 72 pages, one-half of which is occupied by the advertisements of those in the trade, the other half is filled with statistical and other information which must be invaluable to the trade. Accompanying the number is also a map of the Chicago lumber district, with all the lumber yards laid out thereon.

MR. WILLIAM HAMILTON, of Peterborough, informs us that he has had substantial evidence of the advantage of advertising in the columns of THE CANADA LUMBERMAN, inasmuch as since the insertion of his advertisement he has received several orders, and numerous communications with reference to work, directly attributable thereto. We are of course glad to hear it, and trust other advertisers will be similarly benefitted. Readers of the LUMBERMAN ordering anything from its advertising patrons, could do us much good by stating in their orders that their attention had been called thereto by an advertisement in our columns.

THE Duluth *Lake Superior News* says: The amount of logs cut this past winter, will not fall so very far short of the figures given in the *News* on Jan. 6th. Some delay in getting the logs will be experienced, however, on account of the almost total lack of rain since spring opened. On the Nemadji and tributary streams the only drives that have come down clean, are those of Graff, Little & Co., and Hall, Norton & Co., about two million, and one and a half million feet, respectively. A. M. Miller and Duncan, Gamble & Co., will have to wait for almost all their logs on that stream until the June rise; Cutler, Gilbert & Pearson, are in the same fix on about four-fifths of their logs, and Peyton & Kimball on most of theirs.

WHERE TO DRY, HOLD AND SELL LUMBER.

Most of the manufacturers of boards, will we think, agree that the proper and best place to season, hold and sell lumber is at their own mill yards if circumstances will only permit them to do so. In years gone by circumstances unfortunately forbade their doing so and compelled them to forward their cuts direct, or nearly direct from the saw, in order that they might be enabled to keep things moving. While such a course did keep things moving it did so at the cost of much of the legitimate profits which should have accrued to the manufacturer and served to keep him in a state of semi-bondage to those to whom his lumber was forwarded and to whom it was hypothicated as soon as shipped if not before the trees were felled. For various reasons this state of affairs, is just now, happily, well-nigh extinct, and in the interest of the Canadian trade it is to be sincerely hoped that it will remain so. The necessity which caused it in the past no longer exists. Not only are those engaged in the trade stronger than they used to be, but our banks have ample means at their command to enable their customers to carry their lumber at the mills, rather than on the other side.

While we put forward our opinions with due diffidence it does seem to us that nearly all the advantages are with seasoning, holding and selling the lumber cut for the American market at the mills. So far as seasoning is concerned all the advantages are with its being done at the mill, because there yard room costs least, and space being valueless, as compared with that obtainable in commercial centres, it can be piled with a view to its rapid seasoning rather than to the space occupied. Then by drying at the mill it is dried at the point where the minimum amount of capital is invested, and finally it costs less (now that railways are charging by weight) to transport it to market after it is dried than before.

With regard to holding at the mill rather than sending it forward to be sold on commission after it is seasoned, we think the balance of advantage is also with the course we are venturing to recommend. As an article on the "Bears and Bulls" of the Chicago lumber market which we publish in another column, well says the great reliance of the Bears, in being able to break that market rests upon the fact that certain "needy" lumbermen will soon be compelled to sell for what they can get, and that by holding off now they will soon be able to replenish their depleted stocks at figures which while yielding them a handsome profit, will be obtained at the expense of the manufacturer. Inasmuch as the "Bear" interest predominates largely over that of the "Bulls" south of the lakes, and as the commission men are sure of their commission on our lumber once it is shipped to them, no matter where the shipper may come out, it seems to us the true policy of the Canadian manufacturer, and of his backers, the Banks, is to hold the lumber here until it is sold. To send it forward and add freight, etc., to the money locked up therein is only to add to the cost of carrying it in the way of interest, insurance, and storage, while the seller can always do better, when the buyer comes to him than when he goes to the buyer. It may be said that sales will be lost by not having it forward, but while this may be true when the market is getting overstocked, it would not be so when the demand was good, and the worst place in the world to have any commodity, in a dull or falling market, is in the hands of a commission merchant—especially if it has been drawn against. They are anxious to sell and their very anxiety to sell only still further depresses the market. Now that our banks are overflowing with money and our lumbermen are in a sound position, no better time could be taken to adopt the policy of selling from the mill yards. If stocks should accumulate under such a policy then they are pretty sure to accumulate some where, and it surely would be much better to have them accumulate in their own yards, where the least possible capital would be locked up, where they would cost comparatively little to hold and where they would serve as a timely warning to curtail production.

As we have already said, we place these views before our readers with some diffidence, but if they serve to draw attention to an important subject, and still more, if they serve to draw out the opinions of some of those who are so competent to discuss such a subject, this article will not have been written in vain.

THE LATE T. W. BUCK.

It becomes our duty in this number of THE CANADA LUMBERMAN to record the death of Theodore W. Buck, the late deservedly esteemed and popular manager of the Georgian Bay Lumber Compay's business at Waubaushene, Severn River, and Maganettewan. Although we have made several attempts to obtain such particulars with regard to Mr. Buck's career in Canada, as we were sure would prove interesting to our readers, we have been unable to other than what is contained in the following remarks which we find in an exchange as having been made by the Hon. W. E. Dodge at the conclusion of the funeral services at Mountoursville, Pa.

"I have been requested to add a few words to what has been spoken by the reverend gentleman, who, though a stranger, has kindly conducted the services. Mr. Buck has for some fifteen years past acted as agent for my sons and myself in conducting a large and important business, during which time I have had the opportunity of becoming well acquainted with his character as a man and a Christian. As a business man he was active, prompt, and most devoted and faithful to the interests of those for whom he acted, securing their respect and confidence, and to a very unusual degree that of those whom he employed to aid him in the important parts of his business. He was a man of marked business habits, securing in all ways constant order and system in every department, so that the villages under his control were models of sobriety and order. Strict rules of temperance were always maintained, and no one allowed to sell in any place where he had oversight. Mr. Buck's religious character was to be noticed in his simple but decided course in his family. God was honored at his table and at the family altar, or with his wife and children. He was active in securing the privileges of public worship and in keeping up the Sabbath School, acting either as teacher or superintendent. He enjoyed to an unusual extent the best kind of religious reading, and although not in any way forward in speaking of his own views, he was very decided in his religious character in conversation with those who had his confidence. God has been for the past two years preparing him for the change which, no doubt, he often considered as not far distant, and which came at last suddenly. Only the day he left Washington he said to a minister who came to see him, 'I am somewhat troubled at my entire calmness and freedom from anxiety about myself. Do you think I am doing wrong to do so? I have committed myself entirely into God's hands, and to Him I leave it all.' Thus he had been led step by step until he had, without hardly knowing it himself, came to the same point with Paul: 'For I know that if this earthly house of my tabernacle be dissolved, I have a building of God, a house not made with hands, eternal in the heavens.' I have seen Mr. Buck twice within a few weeks, and was gratified to see, in all his feebleness, a ready smile and cheerfulness, with no apparent feeling of anxiety as to the result. He said but little about his personal feelings, but did all he could to keep up his strength and spirits, yet it was very evident that he knew his strength was giving away. I feel perfect confidence that the God in whom, through Jesus Christ, he trusted for salvation, has been preparing him for that rest which remaineth for the children of God. I feel deeply for the dear wife he has left behind, for having been often with them in their own home, I know well the trial there was. It was the home of true love and affection. He never seemed so happy as when with his wife and children. It seemed as if he could never do too much to make his home pleasant for all. May the God of the widow ever be with the afflicted wife to comfort and snstain her in her efforts to train up the dear children in the fear and love of Him whom the husband and father tried to serve."

Mr. Buck's successor at Waubaushene, etc., is, we understand, Mr. G. S. Peckham.

THE RIVERS AND STREAMS BILL DISALLOWED.

It is announced that the Governor-General, on the recommendation of the Minister of Justice, has disallowed the Ontario Act for protecting the public interests in rivers, streams and creeks, passed during the last session of the Ontario Legislgture.

The proprietors of the Peterborough REVIEW have purchased THE CANADA LUMBERMAN from Mr. Begg, and now issue the paper in a greatly improved form. If the LUMBERMAN can be made to pay at all, the Messrs. Toker are the very men to do it. We wish them every success. —*Grip.*

TAXING SAW LOGS.

To the Editor of THE CANADA LUMBERMAN:

CARGILL P.O., May 23rd, 1881.

DEAR SIR,—As your paper is published in the interests of lumbermen, I, as well as some more of your subscribers, would like to know if saw logs are legally assessable as personable property, or if they are not exempt on the same ground as flour-mill men claim exemption on their stock of wheat? Also, if they can be assessed, what would be the maximum value which could be levied on them per M feet? If you can not get this answered in your paper this week, I would like you to write me, giving me your opinion. Also state if it is customary to assess logs in the neighbourhood of Peterborough. I have appealed against assessment on my saw logs, and the Court meets June 1st, so that I would like to have an answer before that date.

Yours truly,

HENRY CARGILL.

While we are quite ready to answer the questions put to us by our correspondent to the best of our ability he must not assume that we give them with the *ipse dixit* of one learned in the law. By reference to the revised statutes (Sec. 6, Sub-sec. 20 of the Assessment Act) we find that "So much of the personal property of any person as is equal to the just debts owed by him *on account of such property*, except such debts as are secured by mortgage upon his real estate, or are unpaid on account of the purchase money therefor" is *exempt* from taxation. As this section of the assessment Act has not been amended, so far as we are aware, and as "saw logs" in common with all other kinds of moveables, is personal property, they come under the operation of this section, and certainly cannot be assessed as such. Whether our correspondent is or is not liable to be taxed on his saw logs seems to us to depend upon whether he, like most lumbermen, obtained the money expended in getting them out from any of the Banks. If he did, clearly he has a perfect right to *deduct* the amount so borrowed from the *fair* value of the said logs—which would of course leave them worth nothing for assessment purposes. Of course if, on the other hand, our correspondent is in the happy position of being able to carry on his winter's operations without borrowing a dollar from anybody, then all his personal property, including his saw logs, is liable to municipal taxation. We have never heard of any of our millmen in this neighborhood being taxed on their saw logs. The idea as thrown out by our correspondent is an entirely new one to us, and one which we are inclined to think will not "hold water" before any of our County Judges. In the prosecution of the appeal which he has entered, the whole matter will, we doubt not, be practically decided by his filling up and making the following declaration for the amount of personal property which he considers himself liable to be taxed under the section of the Act which we have already quoted:—

I,———do solemnly declare that the true value of all the personal property assessable against me——— without deducting any debts due by me in respect thereof, is $———

That I am indebted on account of such personal property in the sum of $———and that the true amonnt for which I am liable to be rated and assessed in respect of personal property, other than income, is $———

TO OUR SUBSCRIBERS.

By reference to the label on each paper, subscribers to THE CANADA LUMBERMAN can see at a glance whether they are in arrears for their subscriptions or not. For instance, if they find after their name, *2 Oct., 81*, then, according to our books, they owe us their subscription for the year ending the 1st Oct. next. As all subscriptions are supposed to be payable in advance and as it has been a continual out-go, with little coming in, since the present publishers assumed the management of the LUMBERMAN, and as it will be necessary to still further increase the expenditure in order to bring the LUMBERMAN up to the standard at which the publishers are aiming, our subscribers would confer a favour, as well as materially assist us in our undertaking, by remitting the small amounts due by them individually, but which in the aggregate amount to a very considerable sum.

THIS increase of exports of $16,420,000 last year over 1879 is made up as follows:—

Products of the Forest	$3,593,048
Animals and their Produce	3,506,973
Agricultural produce	2,655,864
Manufactures	542,336

Chips.

OLIVER LATOUR'S raft of 90 cribs is on its way down the river from Lake Temiscamingue.

THE water in the Upper Ottawa is beginning to fall, having attained its highest level.

PARRY SOUND is to have regular steam communication with Penetanguishene and Midland.

THE Ottawa *Free Press* of the 26th ult., says: Several sales of sawn lumber have recently been made at an advance in price.

A RAFT of timber belonging to Oliver Lattimer, taken out on the Mattawa, has passed Pembroke on its way down.

BELL & HICKEY have finished the rafting of their timber on Lake Temiscamingue and started the same.

CAPT. YOUNG'S saw log drive has been got out in good shape and has been started from Lake Temiscamingue.

BARNET & MACKEY'S logs, taken out on Muskrat River, are now being run into the Ottawa, at Pembroke.

THE British Canadian Lumbering Co. are preparing to light their mills and yards in Midland with electric light.

TRAINS on the Canada Central Railway are expected to be running to the Mattawa by the end of July next.

THE first drive of logs down the Napanee river is over the falls and been towed to Deseronto. The drive consisted of 90,000 logs.

MESSRS. SCOTT & WAGAR'S planing mill and sash factory at Napanee, was destroyed by fire on the 8th of May. Loss, $1,200; insurance, $1,000.

THE log drive on the Upper Ottawa will soon be through. The logs have been got out in partly good form, not such a great quantity being still in the creeks.

THE barque *Vibilia*, which has just brought a cargo of sugar from the West Indies to Montreal, has been chartered to take a load of lumber to the River Platte.

THE *North Star* says: The total quantity of timber cut for the Stewart firm this season, in all parts of the Province of New Brunswick, is about 100,000,000 feet.

A COMPANY is about to be organized to utilize the sawdust produced by the different saw mills throughout the Province of Nova Scotia, by turing it into pulp, out of which paper is to be manufactured. The headquarters of the company will be at Bridgewater.

THE tides at Quebec have been very high of late, flooding some of the wharves in the city and the villages on the banks of the St. Charles. It is feared the logs on the Chaudiere, numbering some 40,000, are in danger. Should the booms give way great loss will result.

OF the 6,300,000 acres to be opened up by the Quebec and Lake St. John Railway Company, 3,000,000 acres are under license or permit to cut timber, and about 180,000 acres are cleared, leaving over 3,000,000 acres of land said to be well covered with spruce, tamarac, white pine cypress, white and black birch and cedar at the disposal of either the Provincial Government or private parties. The Assistant Commissioner of Crown Lands for Quebec in the letter from which the foregoing figures are taken, says that if that portion of these lands) where settlements cannot be established, is judiciously managed they will prove an everlasting source of revenue as it is well established in Canada that the tracts of lands covered with spruce, fit for saw logs, can be cut over every thirty or forty years.

MR. ADAM HALL'S wrought iron shanty stoves are rapidly winning their way into the public favour. Nearly every shanty and drive in this locality is now supplied with them and they always give the very best of satisfaction, as attested by the large number of flattering testimonials, voluntarily given, that have been received by the maker. It is not in this district alone that the stoves are known and appreciated, for on Wednesday last Mr. Hall shipped one to Winnipeg, Manitoba, and has about closed a contract for sixty more, all to be shipped to the same place, for use on the Canada Pacific Railway. He also shipped one on Friday to Penetanguishene, where several of them are already in use.

VENERATION FOR TREES.

There is an old tradition that Abraham planted a cypress, a pine, and a cedar, and that these three were incorporated into one tree, which was cut down for the building of the Temple of Solomon. Isidorus, who lived in the reign of Constantius, assures us that he saw, even in his time, that famous oak in the plains of Mamre under which Abraham is reported to have dwelt, and adds that the people looked upon it with a great veneration, and preserved it as a sacred tree. The heathens went still further, and regarded it as the highest piece of sacrifice to injure certain trees which they took to be protected by some city. The story of Erisicthon, the grove at Dondona, and that at Dolphi, are all instances of this kind.

If we consider the invention in Virgil, so much blamed by several critics in this light, we shall hardly think it too violent. Æneas, when he built his fleet in order to sail for Italy, was obliged to cut down the grove on Mount Ida, which, however, he durst not do until he had obtained leave from Cybele, to whom it was dedicated.

The goddess could not but think herself obliged to protect these ships, which were made of consecrated timber, after a very extraordinary manner, and therefore asked of Jupiter that they might not be obnoxious to the power of waves or winds.

Jupiter would not grant this, but promised that as many as came safe to Italy should be transformed into goddesses of the sea; which, the poet tells us, was accordingly accomplished. The common opinion concerning the nymphs, whom the ancients called Hamadryads, is more to the honour of trees than anything yet mentioned. It was thought the fate of these nymphs had so near a dependence on some trees, more especially oaks, that they lived and died together.

For this reason they were extremely grateful to persons who preserved those trees.

Apollonius tells up a very remarkable story to this purpose:—

"A certain man called Rhæcus, observing an old oak ready to fall, and being moved with a sort of compassion towards the tree, ordered his servants to pour in fresh earth at the roots of it, and set it upright. The Hamadryad, or nymph, who must neceesarily have perished with the tree, appeared to him the next day, and after having returned him her thanks, told him she was ready to grant whatever he should ask.

"As she was extremely beautiful, Rhæcus asked that he might be entertained as her lover.

"The Hamadryad, not much displeased with the request, promised to give him a meeting, but commanded him for some days to abstain from the witcheries of other and mortal maidens, adding that she would send a bee to let him know when he was to be happy.

"Rhæcus was, it seems, too much addicted to gaming, and happened to be in a run of ill-luck, when the faithlul bee came buzzing about him, so that instead of minding his kind invitation, he had liked to have killed him for his pains.

"The Hamadryad was so provoked at her own disappointment, and the ill-usage of her messenger, that she deprived Rhæcus of the use of his limbs. However, says the story, he was not so much a cripple as to be unable to cut down the tree, and consequently fell his mistress."

TIMBER NEWS.

During the week ending 21st of May, the undermentioned timber passed through the Madawaska slides:—

	Cribs.	*Pieces,*
One raft belonging to Wm. Mackey.. ..	85	2,336
One raft belonging to W. C. Croft.....	35	886
	120	3,222

THROUGH CHATS SLIDES.

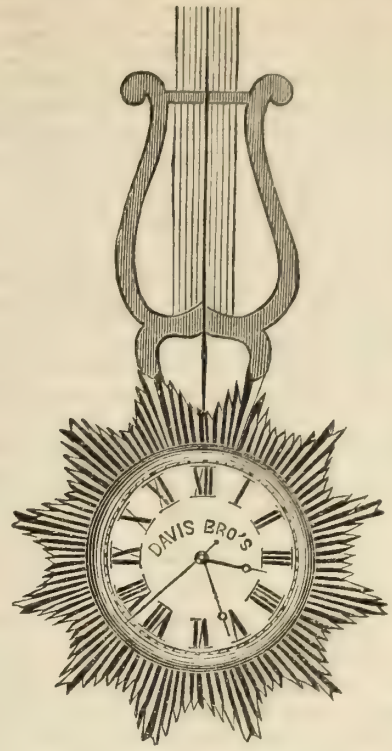
	Cribs.
Two rafts belonging to A. & P. White..	206
One raft belonging to R. H. Klock.....	74
One raft belonging to Wm. Mackie.....	85
One raft belonging to John Fraser.....	112
One raft belonging to Thistle, Carswell, & Co.....	143
	620

THROUGH THE GATINEAU BOOM SINCE 17TH INST.

996 cedars belonging to W. C. Edwards & Co.
6,911 saw logs owned by estate of late G. B. Hall.

Messrs. Thistle, Carswell & Co. and A. & P. White's timber are about through the Chaudiere slides.—*Ottawa Citizen,*

SUN CLOCK



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It stands without a rival, and is the fastest cutting saw in the world. It has beaten the best Canadian and American made saws 33⅓ per cent in every contest. Its superiority consists of its excellent temper. It is tempered under the secret Chemical Process, which toughens and refines the steel. It gives a finer and keener cutting edge, and will hold it twice as long as any other process. We have the sole right for this process for the Dominion of Canada.

None genuine that are not like the above cut, with registered trade mark with the word "The Lance," and Maple Leaf with our name. Price $1 per foot.

CAUTION.—Beware of Counterfeits. There are inferior counterfeits on the market, which are intended to be sold at a high price upon the reputation of this saw. We will send to any address a saw exactly like any counterfeit, warranted equal in quality or no sale, at 60c. per foot. Therefore do not be humbugged into paying a first-class price for a second-class saw. A fact to bear in mind is that if the material and temper are not of the very best quality the shape of the teeth amounts nothing. A saw, like a knive, will not cut fast without it will hold a keen, cutting edge. We have cut off a 14-inch sound basswood log in eight seconds with this saw. Manufactured only by

SHURLY & DIETRICH,

Manufacturers of Saws, Plastering Trowels, Straw Knives, &c. &c.

GALT, ONTARIO. b15

This cut is a simile of Package.

The greatest tribute to its extraordinary merits is, that it was awarded First Prize and Diploma at

Toronto Exhibition, 1880.
Hamilton " "
London " "
Montreal " "

over all other yeasts.

TRY IT, AND BE CONVINCED.

Ask your Grocer for it, or send direct to the factory. PEARL YEAST COMPANY, 39 Front Street, Toronto, Box 1264, b15

THE COARSER VARIETIES OF TIMBER.

An eminent philosopher, passing through a low attic upon one occasion, carried his head so loftily as to strike the collar beams which strengthened the rafters, whereupon a friend, who was with him, remarked that he who looked too high would not only run the risk of breaking his head, but would lose sight of a vast amount of beauty, which could be found only upon a lower level. That this truth applies to the experiences of every-day life is shown in the tendency of human nature to search for gold and diamonds because of a supposed superior reputation and value, leaving to the plodder and economist the task of looking for the baser metals of greater economic value. This truth applies with equal force to the searchers after wealth in the forest productions of the United States. The pine and the oak, together with black walnut and maple, have been the gold toward which the lumbermen has turned his eager eyes, and they have turned his vision away from the humbler, yet not less valuable, sources of forest wealth which exist in the hemlock, black ash, and beech, with which our forests abound.

In one of the timber growing States, there is now an estimated wealth of $87,500,000 in the growing pine timber, estimated at an average value of $2.50 per thousand feet for the standing tree. This is a vast source of wealth to the State in which it is growing, yet in the same State, unhonored and most lightly esteemed, even to such extent that its wanton destruction passes unnoticed, are to be found fully 7,000,000,000 feet of hemlock, which, in the near future, will be sought for at a price scarcely below the present value of the pine, for which it will be utilized as a most excellent substitute in many of the coarser uses of lumber. This hemlock is to-day utilized only in the production of bark for tanning purposes, and it bears to the timber wealth of the State only about the same relation that the hordes of buffalo upon our Western plains bear to the meat supply of our nation, as they are slaughtered by the thousand and stripped of their pelts for the use of the civilized world, while the carcass is left to the vulture, regardless of the fact that a race is being exterminated which can never again be propagated. The hemlock tree of the Northwest, like the buffalo of the plains, possesses a value, the extent of which will be realized only after the process of wasteful extermination has done its worst and no more remains to be utilized. The hemlock in one State, if placed at a value which it will bear before the expiration of five years from this date, would bring to its owners not less than $14,000,000; at the value which is placed upon it to-day it is worth not less than $2,000,000, and, in the endeavor to utilize the bark, the trunk of the tree, which might also add to the wealth of its owner, is left to rot upon the ground or to feed the insatiate forest fires which sweep away so much of our forest wealth every year.

But another despised factor presents yet more astounding revelations of timber wealth. Thousands upon thousands of acres of hardwood timber are yearly destroyed in the clearing of land for farms and the burning up of the forest growths which they contain. The hardwood of the State in question, if valued at but 25 cents per cord, is of the value of $175,000,000, or twice as much as the value of the pine timber. And yet but little account, comparatively, is made of this vast source of wealth. The furniture factories of a mighty nation, the vast commercial industries of the world, are ready and willing to pay gold for this timber, which, to a great extent, is suited to their needs; yet its owners fail to see the opportunity, and large quantities of valuable timber are consigned to the flames. The time is near at hand when a wiser policy must and will prevail, and the modest yet valuable timber growths now neglected for the more pretentious and popular pine, will receive the attention which they merit; and those who now esteem the gold mines more highly than they do the iron, will discover that in the latter is a more enduring source of wealth, toward which they will gladly turn while seeking the high road to prosperity.

The proneness of the human mind toward entering those avenues which give promise of sudden wealth is too well known to need comment. The land of gold will attract thousands; the discovery of iron excites hardly the slightest comment. Yet the iron is actually the more valuable in its adaptation to the wants of man, and in its ulterior effect in adding to his wealth. The careful, earnest, saving plodder of 25 years ago is the rich man of to-day, while the sons of his millionaire employer of the former time are his clerks, his porters, and his draymen. That which is common in every-day experience is neglected by the multitude in the mad rush after wealth, but the sons of the rag-picker and scavenger of to-day will perhaps be the merchant princes of the next generation, the foundation for their immense wealth being based upon the humble and despised occupation which by the multitude is neglected. These truths of every-day experience apply to the now neglected timber wealth of this country, and a wise conservation of the despised hemlock and hardwood growths of our forests will result in the accumulations of wealth far greater in extent than are the colossal fortunes which have been made by the operators in pine timber and lumber.—*Northwestern Lumberman.*

A GLUT OF TIMBER.

The Lancaster, Pa., *Examiner*, says:—Never before in the history of the great boom at Williamsport has it contained so many logs at one time as it does now, the estimate being put at a trifle over 300,000,000 feet. Not less than 50,000,000 feet is in the boom at Lock Haven and along the shores, making a total of 350,000,000 feet secured within a distance of 25 miles. Several of the mills will at once commence working their men a day and a-quarter, and they expect to continue this time all summer. The river has finally fallen to about five feet, and no danger to the logs is now apprehended. Many of the mills will be taxed to their utmost capacity to manufacture the stock now secured, during the season. The rafting business, too, has exceeded all former years. Up to the present time it is estimated that about 1,800 rafts of square and round timber reached Lock Haven, 1,200 of which were measured there. At least 1,500 have passed down the river, and on Saturday night it was reported that over 400 were lying at Marietta. Notwithstanding that such a large number has come down, it is estimated that between two and three hundred are yet back; but as many of them are wrecked, they are not expected to get down on the present water. Such a glut of timber has caused a dull market at Lock Haven. Buyers have purchased about all they wanted, and those who failed to sell early will have to hold on for a while. Such a large number of rafts brought hundreds of hardy lumbermen from the woods to Lock Haven, and for ten days that place has been very lively. Hotels had all they could do to accommodate the crowds of men. One hotel on the river, opposite Lock Haven, which made a specialty of entertaining raftsmen, furnished dinner to 400 men on an average for ten days, and one day the number ran up to 600.

Two Thousand Dollars.

The easiest, cheapest and best way to secure the above amount is to apply for membership in the Mutual Benefit Association of Rochester, N.Y. Pay Dr. S. B. Pollard, 56 Bay Street, one dollar for four medical examinations, he will send your application to the head office, if you are accepted as a member they will issue a certificate of membership, which, on payment of eight dollars, entitles you to full benefits as a member, should you die to-morrow, next day, next week, next month, or any time within three months, this Association will pay to your heirs, or assigns, the sum of two thousand dollars. At the expiration of the three months all you have to do is to pay your pro rata amount, which is from 20 to 75 cents on the death of some other member, who has done nothing worse than to die during the three months just past. By paying your assessments on deaths, you keep your certificate alive, and at the commencement of the second year you are assessed two dollars per thousand to keep up office expenses, etc., for the next year. No easier, surer or better schemes to carry two thousand dollars has ever been devised than the Mutual Benefit Associates, of Rochester, N.Y.

5-1-13

BROAD WAGGON TIRES.

AN INTERESTING STATEMENT FROM ONE WHO HAS GIVEN THEM A THOROUGH TRIAL.

A correspondent of the Chicago *Tribune* says: I am glad to see your paper speak on the subject of broad-tired wagons. I offer briefly my experience, which will answer some questions asked by your correspondents. We keep in repair a road three-fourths of a mile long, over which we haul 30,000 tons yearly, besides a small amount of public travel. While we used narrow-tired wagons, the repairs cost us $100 annually, and the road was bad fall and spring. Our loads then weighed one and a half to two tons. Since we changed to broad tires we haul two or three tons with the same ease and same expense for the trip, and the road is never bad, not in the worst weather, and the cost of keeping it in repair is never over $10 yearly.

Our narrow-tired wagons had an average life of two or three years. Our broad-tired wagons have run three years and show no signs of failure, although they have iron axles and are specially strong and heavy. We can haul loads over meadows and lawns without doing damage at any season. In hauling loads over plowed ground we can haul more than double the load we used to with the narrow tires.

If a new waggon is needed it is best to have it made extra heavy and strong, as well as broad-tires; and, while it costs say double the old style, it will save to the owner, by carrying double the load and not injuring road or farm the extra cost each year. Our tires are three-inch, which on moderately well-drained land is broad enough; four-inch tires are only needed on very sandy or very muddy bottoms.

The best way to fit up an old wagon is to get new wheels throughout, even if the wagon is old, for they will do for a new wagon when the old one is gone. To simply put broad felloes and tires onto old wheels is not to increase the general strength of the wagon, and the owner fails to get the strength necessary for the doubly heavy load which his team can easily haul on the broad-tires.

I am also one owner of a sawmill in a neighboring state. Last year we bought sets of new broad-tire wheels, and put on our old wagons to haul our lumber over the three miles of sandy road lying between the mill and wharf. The result was that, while we paid by the trip, one team took 900 feet of green lumber at a load instead of 600, at the same price, and just as easy, and kept the road in such good condition that the repairs cost almost nothing. The saving to us on each wagon per month was $11.25, which would very soon pay for the wheels.

I would not advise reducing the size of the wheels, for the larger the wheel the easier it surmounts an obstacle. One who has not tried it can hardly believe how heavy a load a team will haul on a broad-tire wagon. We have hauled on a good dirt road, already worn smooth with broad-tires, and having several rather easy grades, a steam boiler weighing five tons with a single team weighing 2,700 pounds on one of our heavy iron axletree, broad-tire wagons (tires, three inch). Such a load could not be moved on an ordinary wagon at all.

Now as to cost. The wagon I speak of has two and three-fourth inch arms, and weighs with box 1,360 pounds, and cost in a common wagon-maker's shop $135. It will last twenty-five years if kept painted and sheltered, though in constant use. It would last the ordinary farmer forty years or a lifetime. Three years' use of four of these wagons has not cost us anything for repairs save painting. They are too strong to break. Once again to farmers; Buy new wheels, very strong and heavy, with little or no dish; but them on your old wagons, and you will never buy any more wheels while you live. When your old wagon wears out have a new one made twice as strong and put these wheels on it, and you will never live to see it worn out if properly cared for. If you are to buy a new wagon, here are the sizes:—Take iron axles by all means, with 2½ to 2¾ arms, 2¼-inch spokes, 3 to 4-inch tire; bent felloes, ¼ inch narrower than tire; hind wheels only four inches higher than fore wheels. On this wagon a good 2,400-pound team on a fair road will handle easily two or three tons for long distances if no steep hills, and you may venture four tons for short hauls. The wagon itself will weigh 1,300 to 1,350 pounds, but your team will never feel the extra weight, for it moves on the surface and not from one to four inches deep in mud.

The reason why so much heavier loads can be hauled on broad tires is not alone because the tires do not cut down; there is another advantage equally great: Look at any old narrow tire and you will see that in wearing off at the corners it has acquired a round surface, as though made of half-round iron. Now when the wheel approaches a rut it tends to slide in and tips the wheel on the axle, causing friction on the end of the axle, and not on its whole length, which makes it turn very hard. You will always notice your team pulling harder when your wheels are trying to slide into a rut and can't get there. A broad tire always has enough flat surface, even when well worn, to stand up square and turn evenly on the arm. The use of broad tires in cities I need not speak of, as they are now so common that every one can see the demonstration. I would agree to furnish all the wagons for any city or state, free of cost, if I could be guaranteed the amount of money saved in repairing streets and the extra price of the greater weight hauled at each load by using broad tires, and would pay a round sum for the monopoly.

THE TIMBER TRADE.

Large quantities of square timber are coming down the Nipissing Railway. Between the Northern Elevator and Queen's Wharf five firms have their men at work forming the timber received per Northern and Toronto, Grey & Bruce Railways into rafts. The following is the business here of only one of these, and the others being pretty much on a par with it the total trade may be judged according to information supplied by the foreman:—They will send off five rafts altogether this season, all for the Quebec market. The timber to be used consists of 150,000 feet of rock elm and 15,000 feet of white pine, per the T., G., and Bruce. The Northern brings down for the same firm 30,000 feet of white oak, 15,000 feet of red do., 250,000 feet of white pine, 45,000 feet of ash, 500 traverses and 300 floats of tamarack, and about $1,000 worth of withes are used in binding these rafts. The foreman referred to says that the past year has been an extremely good year for the timber trade, plenty of snow in the bush for hauling, and enough water by the spring thaws to float the logs down the rivers to the shipping point. The men in his employ are thirty-five in number, and are all English-Canadians, with the exception of twelve, who are Frenchmen. The figures mentioned above are those of the whole season's business of the firm; as yet only a comparatively small quantity of timber has been received. So far the Northern Railway freight office officials report that no timber has as yet come down from Collingwood or Muskoka, 123,000 feet of white pine and 73,308 feet of hardwood comprising the total consignments of timber received; this is all from stations along the line between Toronto and Collingwood.—*Globe.*

Take a Pride in Supporting Liberally.

THE CANADA LUMBERMAN.—This paper, formerly published in Toronto, has been purchased by Messrs. Toker & Co., of the Peterborough REVIEW, and will in future be published in the latter town. The first number under the new management is before us and shows a wonderful improvement in the paper. THE CANADA LUMBERMAN will be purely a non-political trade organ and will contain such valuable information as should render it indispensable to all interested in lumbering operations. From the reputation of the new proprietors of the LUMBERMAN we are satisfied they will issue a publication which Canadian lumbermen may well take a pride in supporting liberally. It will be published semi-monthly at $2 per year. Address Toker & Co., Peterborough.—*Collingwood Messenger.*

ZOPESA.—A healthy man never thinks of his stomach. The dyspeptic thinks of nothing else. Indigestion is a constant reminder. The wise man who finds himself suffering will spend a few cents for a bottle of *Zopesa*, from Brazil, the new and remarkable compound for clensing and toning the system, for assisting the Digestive apparatus and the Liver to properly perform their duties in assimilating food. Get a 10 cent sample of *Zopesa*, the new remedy, of your druggist. A few doses will surprise you.

CLASS JOURNALISM.

We find the following valuable suggestions in the *Northwestern Lumberman* :—

The readers of the *Lumberman* are always demanding facts, and to meet this requirement is often a matter of serious and trying difficulty to the editor of their paper. Few of the uninitiated readers of trade journals can form any idea of the magnitude of the undertaking that requires a given amount of interesting and useful information every week or month, as the case may be, no matter in what condition of dullness the trade may languishing at the time of its issue. Like that celebrated character of Dicken's creation, Gradgrind, the demand is still and always for facts, and they must be supplied whether they apparently exist or not.

Were this better understood and appreciated, by the patrons of trade papers in general, less grumbling and faultfinding among them would be heard—and let us say that the *Lumberman* has no cause to complain on this point. Instead, they would, perhaps, aid their fellow craftsmen, as well as themselves, by sending items of interest, although they might not seem of such to themselves, to their paper, and among its readers many would be found who would appreciate them as news. Such items also often prove food for thoughts that would that would not otherwise have occurred to the mind of the editor, who, crowded, as he necessarily always is, with the worry and taxation of mind incident to newspaper publishing, cannot sit calmly down for an hour or two to cudgel his brain for the new and original ideas that require only the slightest hint from a correspondent to start to his mind of their own accord, and be brought forth in a column or so of thoughts and facts.

These, again, may reproduce themselves in the minds of others, each time receiving new additions and being improved upon, until, finally, some needed improvement or reform is produced that may prove the means of a saving and a benefit to the one who originally started the idea by sending an item that to him was of no import. Enterprising newspapers have many resources and spend large amounts of money annually searching for information, and although this enterprise and expenditure is bountifully rewarded by the gathering from far and near of all sorts of items, new and old, which the editor carefully sorts and prepares, there still remains plenty of room for more. And right here is where its patrons can aid it most, for a great number of exchanges have to be thoroughly gone over before sufficient matter of interest to its readers for a five-line item can be found. If you see anything in your paper that you think not worth reading, remember that you might have been able to supply the facts for something more interesting, thus making the paper much more readable for someone else, too.

A general newspaper and a trade journal are in widely different fields—although many so-called newspapers are paddled and stuffed with superfluous words and sentences, breathing tautology on every page, for the sole purpose of being known as the largest paper published in their neighborhood, thus wasting money, paper, and not only their own time, but also that of their readers, in their vanity. But they have a large scope to work in, embracing politics, news, science, theology and a hundred and one topics of general interest to the whole world, while the strictly class journal is confined to the few subjects directly connected with the trade it represents, and is compelled to harp on the same cord week in and week out and year in and out, with no variety and little change further than the advance of improvements furnishes, as it is not expected to be read by anyone not connected, directly or indirectly, with its particular field. This being the case, the *Lumberman* would urge its readers not to be backward with any items, no matter how small they may be, that could possibly be made of interest to any one. They can rest satisfied that they will receive all the attention they merit, and their senders will be kindly remembered by its editor.

Ask your druggist for a trial bottle of BURDOCK BLOOD BITTERS, it will only cost you 10 cents, and a few doses will prove its efficiency as a health restoring Tonic regulator of the Bowels, Liver and Kidneys. It is a specific for all diseases arising from impure blood and disordered secretions.

THE TIMBER LINE OF MOUNTAINS.

Some very interesting facts were brought out at a meeting of the Academy of Natural Science of Philadelphia, concerning the timber line of mountains. The highest Alpine vegetation consists for the most part of short stemmed perennials. Lower down are found dwarfed trees of species, which, still further down the mountain sides, form forests of considerable height, and which, as trees suited to merchantable purposes, make what is known to mountain travelers as the timber lines. In the mountains of Colorado the forests commence at about 7,000 feet above sea level, and continue up to about 11,000 feet, when they suddenly cease. At this point the coniferous trees are from thirty to forty feet high, and above the same species exist as stunted shrubs, seldom exceeding three or four feet in height, and often but a foot, though trailing widely over the ground. In this dwarfed condition they are often found some 1,500 feet higher up, or half way from the recognized timber line to the top of the mountain. On Mount Washington, in New Hampshire, which is a little over 6,000 feet high, the timber runs up to about 4,000 feet, while Mount Webster, a mountain forming the southern peak of the same chain, and about 4,000 feet high, has little timber above 3,000 feet. Roan Mountain, in North Carolina, is about 6,300 feet above the level of the sea, and on some parts of it timber extends to its summit. At a height of 6,000 feet a black oak was measured that was five feet in circumference at three feet from the ground, and forty feet high.

The question as to the peculiar course of the timber line is a mooted one. Until recently it has been referred wholly to climatic conditions, of which temperature and moisture have been regarded as the chief elements in producing the result. The objection urged to this theory is that the dwarfed and gnarled cone-bearing species, extending so many hundred feet up the mountain sides, never produce seed, which leads to the alternative of believing that the seeds have been carried up the mountain sides in enormous quantities and to great distances from the fruiting trees below by winds, or else that there were seed-bearing progenitors of these scrubby trees, beneath the tall protecting branches of which they had their earliest stages of growth. The result of an examination of different parts of Mount Washington favors the latter supposition. As is generally known, there is a railway running straight up the mountain side from the base to the summit. Near the timber line a cut about ten feet deep had to be made through an area covered by mature balsam firs. Under the trees moss and dead roots and old fir leaves had made an earthy strata of a foot in depth. The moss was still green from the rains, melting snows, and fogs of this elevated region, and sustaining the various kinds of low vegetation common to such heights. Young firs were springing up in great abundance, but all the larger trees were dead, though here and there might be seen a branch with a few lingering green leaves. This mass of dead, standing timber occupied several acres, and the reason of the death of the trees was evident. The cut showed that the forest stood on a mass of large but loose rock, through which the water from the mountain above rushed, carrying with it all the earthy matter on which the larger trees had subsisted, but leaving the tongh, turfy matter at the surface, on which the smaller trees of the same sort may live for many years. With the death of the larger trees there is an increase of light, and then the grasses and sedges speedily take possession, holding together the loose soil and permitting, in many cases, an increase of the earthy layer by holding much of the disintegrated rock which washes down from above.

A careful examination of the patches of scrubby spruces above the timber line not infrequently shows dark patches of vegetable mould, evidently the remains of larger trees that have been growing, where now only the masses of small scrubby plants exist. In some places a sharp stick may be pushed down among the dwarf firs and spruces, and the mass of roots intermixed with earth found to be but a foot or so deep over the loose rock from which the earth has been wholly washed away. Again, there are some places, often nearly an acre in extent, where the scrubby first are still standing, dead, from the earth having been washed away, not leaving enough for even the moderate demands of these small bushes.

It is evident that many of the dwarfed specimens are of a great age. Some that were examined were certainly fifty years old, though the stems at the ground were no thicker than a man's wrist, and, trailing on the ground, occupied but sixteen or twenty square feet of space. —*Northwestern Lumberman.*

Do not let prejudice stand in the way of relief if you suffer from any lingering disease. Burdock Blood Bitters cure others, why should it not benefit you? If it is a specific for all forms of Blood, Liver, and Kidney complaints. Nervous Headaches, General Debility, Scrofula and all diseases of the Secretory system. trial Bottles 10 Cents.

Wanted.

A SECOND HAND DOUBLE EDGER; also a LATH MACHINE, both in good repair. Reply stating lowest cash terms or particulars to Box 1002, Peterborough. L10

For Sale.

A 40 INCH LEFFELL WHEEL and COMPLETE CIRCULAR RIG, all in good order, suitable for a fifteen foot head. Apply to Box 1002, Peterborough. L10

Reid & Co.,

WHOLESALE LUMBER DEALERS. Lumber, lath, shingles, &c. Car lots to suit customers. Best Culls in the market at from $6 to $7 per M.

OFFICE ON DOCK.—Esplande, foot of Shelbourne Street, Toronto b15

Hardwood Timber Land

FOR SALE.

FOR SALE, 1200 ACRES HARDWOOD TIMBER LAND near Nipissing Railway, Coboconk. Easy terms. OSHAWA CABINET CO., Oshawa. b13

Situation Wanted.

A Book-keeper of first-class experience desires a situation with a lumber firm. An opportunity of acquiring knowledge of the lumber trade more of an object than the amount of salary. Unexceptional references both as to character and ability.

b15 Apply to the Editor of THE CANADA LUMBERMAN.

The Stewart House,

Headquarters of Lumbermen in Peterborough, corner of Hunter and Water Streets. Good accommodation. Terms, $1 per day. Free 'bus at trains.

b15 T. CAVANAGH, Proprietor.

Allandale Junction Hotel

Travellers by Northern Railway have 15 to 20 minutes by all trains, for refreshments. Solid meals. Tea and coffee at counter. Fine brands of Liquors and choice Cigars. b17 E. S. MEEKING, Proprietor.

Orillia House,

ORILLIA.

New and Commodious Brick Building; best north o Toronto; splendid sample rooms; centrally located; free 'bus. b20 JOHN KELLY, Proprietor.

The Queen's Hotel,

TORONTO, CANADA.

McGAW & WINNETT, Proprietors. Patronized by Royalty and the best families. Prices graduated according to room. b20

St. Lawrence Hall,

PORT HOPE.

Is noted for its superior home-like comforts—a well kept table, equalling the best hotels in Toronto, and large, well-furnished rooms. Good sample rooms on ground flour. Walton Street, Port Hope.

b26 WM. MACKIE, Proprietor.

St. Louis Hotel.

THE RUSSELL HOTEL CO., Proprietors.

WILLIS RUSSELL, Pres., Quebec.

This hotel, which is unrivalled for size, style and locality in Quebec, is open throughout the year for pleasure and business travel. b18

Fraser's Hotel,

GRAVENHURST, ONT.

HENRY FRASER, proprietor, (successor to Dougland Brown.) Mr. Fraser having purchased and thoroughly renovated and refitted that old established hotel, so long and popularly kept and owned by Dougland Brown, in the Village of Gravenhurst, is now in a position to attend to the wants of the travelling and general public. Parties *en route* to the Muskoka District, will find "Fraser's" a comfortable stopping place. The Bar and Larder are well furnished. Convenient Sample Rooms for Commercial Men. Good stabling and attentive hostler. Free 'bus to and from trains and steamboats. b26

Queen's Hotel,

BRACEBRIDGE.

JOHN HIGGINS, Proprietor. The proprietor (late of Georgetown,) having lately purchased the above hotel,) will endeavor to make it one of the best [illegible] in the District of Muskoka. Tourists and hunting parties will receive every possible attention. Free [illegible] and from steamboat wharf. Terms, $1 per day. b29

The American Hotel,

BARRIE, ONT.

Collier Street, Adjoining the Market.

RATES REASONABLE, CENTRAL LOCATION, FREE BUS TO AND FROM ALL TRAINS.

☞ Every accommodation for Commercial and LUMBERMEN.

L14 W. D. McDONALD, Proprietor.

SAWYER, ENGINEER & MILLER

A PRACTICAL MAN to take charge of a Saw Mill, Shingle Mill, one run Flour Mill, with power sufficient to run alternately, situated on Duck Lake, N. W. T., 500 miles west Winnipeg. Engagement for a year and expenses paid. Apply immediately, stating experience, reference, salary expected, when could leave. A man accustomed to our machinery preferred,

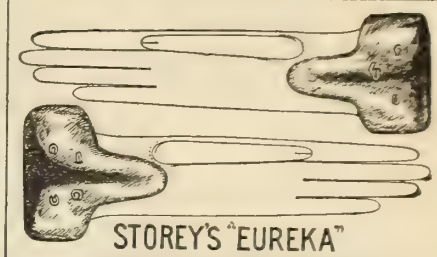
1L14 WATEROUS, BRANTFORD.

CANOES!

The undersigned keeps Canoes suitable for LUMBERMEN, SPORTSMEN and others constantly on hand. Price List on application.

WILLIAM ENGLISH

8L14 PETERBOROUGH, ONT.



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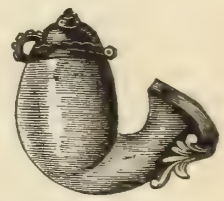
W. H. STOREY & SON.,

ACTON, ONTARIO,

GLOVE MANUFACTURERS.

The best description of GLOVES and MITTS in every variety of material and style manufactured by us. b15



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Manufacturer of all kinds of Lacquered and Enamelled Woodwork, Turning and Carving in

WOOD, HORN AND IVORY.

BILLIARD BALLS

Turned and coloured a speciality.

☞ MEERCHAUM and AMBER GOODS repaired in first-class style. b17

77½ King St. West, Toronto, Ont.

National Pills, superior to all other purgatives in strength and virtue, in safety and mildness of action.

TRUSSES.

CLUTHE'S PATENT SPIRAL TRUSS all attachments improved. No more buckles, all on solid brass casting. Book on rupture and human frame free. Send address in full post card. Best true information about rupture and deformities. CHAS. CLUTHE, Surgical Machinist, 118½ King Street west, Toronto. 12L13

Market Reports.

OFFICE OF THE CANADA LUMBERMAN,
PETERBOROUGH, May 28, 1881.

From the full reports which we give this week from all parts of the country, it will be seen that the American market is decidedly firm and that "good and dry" lumber is being picked up wherever it is to be found. The reports from the English market are not, however, so promising, although our private advices lead us to believe that *good* timber will bring about the same prices in Quebec this year as last.

Toronto.

From Our Own Correspondent.

TORONTO, May 25th, 1881.—During the last two weeks shipments of lumber from this port has been exceedingly meagre compared with what might have been done could cars have been secured to convey the lumber awaiting shipment at the different points on the Northern, North Simcoe and Hamilton and North Western railways. The principal cause of the scarcity of lumber flats arises from the fact, that a large number of cars are being used in construction, preparatory to a change of gauge on the above roads, and after that has been completed there is no doubt but lumber will come forward more rapidly. There is no upward move in prices on lumber for shipment to record, but previous quotations remain firm, and freights seem to have now settled down at $1.25 per M to Oswego, and $2.00 per M for timber, although some charters have been effected at $1.20 per M.

The local market is fairly brisk, now that the question of wages has been settled, building has been vigorously resumed, and yard-men look forward to a busy summer, and as the mill-men are now demanding acceptances of sight drafts on account of their shipments, it may be fairly assumed that retailers will also have to curtail credits, and may thereby avoid making many of the bad debts so frequently made during past years, therefore the outlook on the whole for retail dealers are bright. There is also another reason why yard-men may look forward to a brisker trade. During the last five or six years wholesale men hurt the yard trade by bringing down cars of lumber ahead of orders, and then when the cars arrived, drummed the city for purchasers, knowing that demurrage for detention of cars would not be enforced, so that virtually the R.R. yards were made retail yards of to the loss of those who were paying rents, taxes, and insurance on yard property. This will now become a thing of the past. Unload quick has become the order of the day, and retailers who have borne the heat and burden of the last few years of hard times, will naturally rejoice somewhat at this additional feather in their hats.

Prices at the yards rule as follows :—

Scantling and joist, up to 16 ft	$11 00
" " " 18 ft	11 50
" " " 20 ft	12 00
" " " 22 to 24 ft	13 00
" " " 26 ft	14 00
" " " 28 ft	15 00
" " " 30 ft	17 00
Mill cull boards	$ 8 00@ 9 00
Shpping cull boards	10 00@11 00
" stocks firm at	$11 00
Dressing stocks	14 00
Dressed sheathing and flooring, 1-inch	20 00
" " " 1¼-inch	24 00
Dressed shelving	17 00
XXX sawn shingles, ₱ M	2 50
Lath	1 60

Car load prices rule $1.50 per M below retailers rates on rail here, and shingles firm at $2.25, and lath $1.30.

Boston.

The general features of the market remain substantially as last week, with a good demand and prices very firm. Local yards are continuing the increased call which was noted last week, and dealers report a number of larger orders at the same time. Both eastern and western pine are selling well. Hardwoods remain very scarce and hard to buy except at full rates. The amount of building going on is very large, and a lively call is anticipated during the month of June. Prices generally remain as before quoted.—*Boston Journal of Commerce.*

CANADA PINE.

Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
do do 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

Chicago.

CHICAGO, May 18, 1881.—The cargo market is not so strong as it has been. Piece stuff has weakened noticeably since our last report, standard cargoes being sold to-day as low as $9.50 and $9.75, and inferior ones at $9.25. Yesterday a load of Manistee stuff was placed at $10, but this figure, so far as we can ascertain, was not reached in to-day's transactions. Medium mill run is also slightly weaker, though the range given covers the market. Common inch has not fallen off materially. Standard shingles have not been sold above $2.40 for some days, and that figure is now put down as the ruling price. Extra A shingles bring $2.50 and $2.60. It will be observed that there has been a slight decline in these, which is no doubt due to the determination of the buyers that they would not attempt to handle any considerable quantity of them at the figures first made. It is a question whether they will buy much more freely now, though sellers hope to get along without further concessions. Lath are steady at $1.75, none having been sold at any higher prices.

The stock of lumber for sale during the week was the largest that has been offered this season. Sunday and Monday a large fleet came in, and at the close of business to-day there was still some of it at the dock unsold. There are plenty of buyers around, or to put it a trifle more accurately, perhaps, plenty of people who would be buyers if they could get the sellers to come to their terms. The lumber arriving for sale has certainly not moved with as much celerity as would be desirable from the manulacturers' point of view, though the transactions seem to cover the larger part of each day's supply. Good inch lumber is said to be in demand, and the strongest thing on the market. Consignments of anything ranging from number one Muskegon stock upwards can be placed, it is said, without difficulty, and at about asking prices. One operator on the market reports a sale of 6,000,000 feet of lumber from number one logs at figures netting him fully $1 more than the same kind of lumber brought last year.

Indications of the course of the market for the next wesk or two are not very plenty. The bear element is hopeful because of what it has already done, and the bull side is cheered up by the reflection that its enemies have not accomplished as much as they expected to. Between the two it is hard to decide which has most reason to hope or fear. One commission man in speaking of the outlook expressed the belief that they would not be able to sustain present prices without some improvement in the demand; that is, of course, if the lumber continues coming in as rapidly as it has in the last few days. The *Lumberman* does not pretend to be able to predict the result, and it believes that is something no one can do now. What piece stuff and boards will sell for later on in the season, is emphatically one of the problems of the future.

While lumber is weakening, the prices exacted by the vessel men for bringing it from the points of manufacture are getting firmer, and even advancing somewhat. The rate from Manistee is reported at $2.25; from Ludington, $2; White Lake, $1.87½; Muskegon, $1.75; Grand Haven and Spring Lake, $1.75; Menominee and Cedar river, $2.25, and Oconto $2.50. Cedar post charters range from eight to nine cents for Green Bay and west shore ports, the posts to be delivered on the rail. These figures show a considerable advance over the prices ruling at the opening of navigation, and go to show that vessel owners, for whom the season must necessarily be a short one, propose to make it as profitable as they can.

Receipts and shipments of lumber and shingles for the week ending May 17 :—

	Receipts.		*Shipments.*	
	Lumber.	*Shingles.*	*Lumber.*	*Shingles.*
1881	56,500,000	28,540,000	11,862,000	2,779,000
1880	42,073,000	20,243,000	12,763,000	1,833,000

Receipts and shipments of lumber and shingles from January 1st to and including May 17th :—

	Receipts.		*Shipments.*	
	Lumber.	*Shingles.*	*Lumber.*	*Shingles.*
1881	198,842,000	102,232,000	194,425,426	34,764,000
1880	221,194,000	119,627,000	194,569,000	33,773,000

On the whole, orders are not coming in quite as freely as they did two weeks ago. Every man in the country who has bought is clamoring for the delivery of his purchase, many of them, seemingly, not understanding that an unsurmountable barrier has stood in the way. The slight falling off in orders in some directions is due, no doubt, to the fact that most of the lumber that is bought now is wanted for immediate use, and, it being known that prompt shipments could not be made from this market, purchases have been made at points where no railway difficulties have existed.

We learn of one cut list that has been sent out, but most of the dealers profess to believe that lumber is worth what the members of the Exchange say it should be sold for, and make no concessions. The lumbermen, it will be remembered, hold another meeting on Saturday, and probably they will decide then whether the list as it now stands can be maintained.

Sash, door and blind manufacturers report free orders from all points in the country within their reach, which is the best possible indication that building is general.—*Northwestern Lumberman.*

STOCK ON HAND MAY 1.

	1881.	*1880.*	*1879.*
Lumber	228,256,844	238,483,874	194,180,957
Shingles	73,698,575	115,116,000	111,350,000
Lath	21,038,756	23,736,360	18,155,522
Pickets	2,693,844	670,259	390,905
Cedar posts	550,027	75,727	118,123
Hardwood	11,275,000	.....	.....

COMMON BOARDS—ROUGH.

	Dry.
Common boards, 12 in	$15 50
10 and 20 ft	14 00
12, 14, 16 and 18 ft	13 50
Culls, all lengths	11 50
1½ and 1½ com	13 50

TIMBER AND DIMENSION—DRY.

Small timber, 18 ft. and under	$12 00
12, 14, 16 and 18 ft. joist	13 00
2x4, 10 and 20 ft	13 00
2x4, 18 ft	13 00
20 feet	14 00
22 feet	17 00
24 feet	17 00
26 feet	20 00
28 feet	20 00
30 feet	20 00
2 in. cull plank, all widths	9 00
2x4 culls, all lengths	9 50

Albany.

The receipts of pine lumber, wintered over on the canal, and of new have been moderate; they have been turned in on sales made ahead, thus leaving the market temporarily bare, and as a consequence quiet. Prices are steadily maintained with a good demand, principally from New York, Long Island and New Jersey, and is largely for uppers—for which, also, there is some local speculative demand—on a market which for that grade is certainly the cheapest of any point. The Saginaw and Chicago markets are notably held very high on the upper grades with perfect confidence on the part of the trade that present prices will be maintained. The new cut at Saginaw continues to be sold largely ahead and at full prices, especially on upper grades.

From Canada, the advices are firm and active markets; logs are arriving freely, and there is not any further apprehension of shortage on that account.

Hard woods are in continued good demand and unchanged in price.

Canada lumber is arriving freely by canal, and has been largely absorbed by sales made some time ahead; new orders continue to come forward and there appears to be no let up to the demand, notwithstanding the deliveries from the Champlain are far ahead of those of any previous season; of course no accumulation of stock is looked for; prices are firmly held.

The exports of lumber from New York are very free; those for April were among the largest ever known, reaching nearly 10,000,000 feet; for the first four months the exports were 26,178,000 feet against 24,093,000 feet for the corresponding four months of 1880.

The receipts by canal at tide-water from the opening of navigation in 1881 (May 17th) and the opening in 1880 (April 20th) were :—

	Boards and Scantling, ft.	*Shingles, M.*	*Timber, cub. ft.*	*Staves, lb.*
1881	21,871,000	99	12,900	358,200
1880	65,951,900	312	38,000	2,824,000

Lake Ontario freights to Oswego, $1.00 from Port Hope; $1.25 from Toronto; from Oswego to Albany, $1.70.—*Albany Argus.*

If you suffer from any chronic disease arising from Impure Blood, Sluggish Liver, disordered Kidneys or inactivity of the Bowels; if your Nervous System is deliberated from whatever cause arising, do not despair, but procure a trial bottle of Burdock Blood Bitters; it will only cost 10 cents. Large Bottles $1,00. For sale by all medicine dealers.

Burlington, Vt.

Prices are firm at quotations. Assortments are quite broken, but will soon be replenished as the canal is now open. The first tow of the season arrived May 9th. The projected work throughout New England is reported to be very large, and we anticipate a good summer and fall trade. So far we cannot report as heavy a trade this season as last, for the corresponding time. Our planing-mills, box and door manufactories are having a large trade, some of the box shops running 12 hours per day. The Whitehall canal opened, May 12th.

PINE.

1x10 as run, box out	$20 00@22 00
select	47 00@49 00
1st shelving	35 00@37 00
2nd quality	31 00@32 00
pickings	31 00@32 00
shippers	22 00@23 00
box	16 00@17 00
1x12 as run, box out	25 00@26 00
select	48 00@49 00
1st shelving	37 00@39 00
2nd quality	33 00@34 00
pickings	31 00@32 00
shippers	23 00@24 00
box	16 00@17 00
1x14 as run, box out	30 00
box	18 00@19 00
1-inch siding, as run, box out	28 00@30 00
1-inch select	40 00
1st shelving	32 00@33 00
2nd quality	31 00@32 00
pickings	30 00@32 00
shippers	21 00@22 00
box	14 00@15 00
1¼-inch sidings as run, box out	36 00@38 00
box	16 00@17 00
1½-inch as run, box out	37 00@39 00
box	16 00@17 00
2-inch as run, box out	38 00@40 00
box	16 00@18 00
1-inch 1st quality sheathing, ⅞	38 00@40 00
2nd quality	31 00@32 00
3rd quality	22 00@23 00
sap clear	30 00@32 00
⅞-inch 1st quality, worked ½	27 00@29 00
2nd quality	20 00@21 00
3rd quality	13 00@15 00

All of the above are in 12 to 16 feet lengths.

SPRUCE—DRESSED.

Quebec spruce, clear	$24 00@25 00
" " No. 1	17 00@18 00
" " No. 2	12 50

SHINGLES AND LATH.

Extra cedar shingles	$3 50@ 3 75
XX	2 50
mixed	2 40@ 2 50
extra sawed pine	4 25
clear	3 25
Lath, pine, per 1,000 pieces	1 70@ 1 80

Oswego, N.Y.

No change in quotations. The demand is good, but the assortment is poor. All the good lumber is out of market. Buyers have difficulty in getting the various kinds needed, and country dealers have run stocks down low. The volume of business is much larger than last year. Dealers are paying up well, many of them taking the advantage of allowance for cash who heretofore have taken the full time allowed. The general feeling among dealers is that prices for the present will be maintained. All the old cut is now in second hands. The yards are rapidly filling up, and shipments to tide water are brisk. Canal freights are firm at at $2.65 to New York. Lake freights, $5 from Saginaw and Cheboygan.

Quotations are as follows :—

Three uppers	$42 00@45 00
Pickings	32 00@35 00
Fine, common	20 00@25 00
Common	14 00@16 00
Culls	12 00@14 00
Mill run lots	17 00@22 00
Sidings, selected, 1 inch	32 00@34 00
" 1¼ inch	30 00@38 00
Mill run, 1x10, 13 to 16 ft	17 00@21 00
selected	20 00@25 00
shippers	15 00@16 00
Mill run, 1 and 1¼ inch strips	16 00@20 00
Culls, selected	22 00@30 00
Culls	12 00@14 00
1x6 selected for clapboards	24 00@35 00
Shingles, XXX, 18 inch, pine	3 75@ 4 00
XXX, 18 inch, cedar	3 00@ 3 15
Lath	1 40@ 1 60

Buffalo.

If lake freights should decline materially we think lumber will go lower, but not to remain very long. Trade is not quite as active as it was a few weeks ago, which is accounted for by the fact that the farmers are very busy getting in their spring crops. A busy season is however looked for.

We quote cargo lots :

Uppers	$35 00@40 00
Common	16 00@19 00
Culls	11 00@12 00
Dressing stocks	18 00@20 00
Dressing sidings,	17 00@19 00

Yellow Oil is *par excellence* the remedy for Pain, Lameness, Rheumatism, Croup, Deafness, Burns, Frost Bites, Stiff Joints, and all flesh wounds. Any medicine dealer can furhish it.

Saginaw Valley.

The *Lumberman's Gazette* says the market continues active and sales of good round lots at market rates are of daily occurrance. Confidence in the maintenance of present prices is unshaken, no reason appearing why there should be a decline. The supply of the finer qualities of lumber is limited and sales of coarser stock are more frequent. Among the sales reported are 1,500,000 at $7.50, $14 and $35, 1,200,000 feet coarse at $6.50, $13 and $32; 2,000,000 feet good stock at $7, $14 and $33; 1,000,000 feet at $8 straight; 700,000 feet at same figure; 500,000 feet at $7.25, $14.50 and $35; 2,000,000 feet coarse at $6.50, $13 and $30; 500,000 feet at $7.50, $15 and $35; 1,230,000 feet coarse at $9 straight. Several other sales at about the same range of prices have been reported, but these are sufficient to show the range of prices.

The slight change in prices at Chicago will have no effect on this market. The eastern and Ohio demand keeps this market steady.

Shingles are in good demand and the supply is not large. Sales have been made at $1.95@2.10 for clear butts and $2.95@3.10 for XXX. Some dealers give quotations at $1.95@2.15 for clear butts and $2.95@3.15 for XXX, but we hear of no sales at the outside figures.

Lake freights remain the same as previously quoted, namely $2.50@2.75 to Chicago and Ohio ports; $3.00@3.25 to Buffalo and Tonawando, the outside figures from Saginaw, inside from Bay City.

The shipments the past week have been over 20,000,000 feet of lumber, 6,000,000 shingles, 1,473,000 hoops, 229,400 staves and 500,000 lath. The shipments are over 100,000,000 feet behind last season.

General quotations here are:—

Shipping culls	$ 6 50@ 8 00
Common	13 00@18 00
Three uppers	32 00@38 00

Tonawanda.

The season is now fairly opened, the harbor being dotted with daily arrivals of incoming western craft, lumber laden. The arrivals of pine for the week have footed up: From Bay City, 3,976,000 feet; from East Saginaw, 700,000 feet; from Au Sable, 470,000 feet; total, pine, 5,146,000 feet; oak, 151,000 feet; shingles, 1,500,000. Lake freights have been $3, as reported last week in anticipation. Several have expressed their determination to hold off a little, being sanguine of a decline, expecting to pay $2.50, or thereabouts. The ice is now all out of the lake and river, and there are no obstructions to navigation. Wind and weather have been very favorable up to date.

Dealers report sales as only moderately brisk, corresponding in this respect with reports from all quarters, on account of spring work in all other departments, somewhat diverting the attention of consumers. Jobbers are waiting for the stocking up of Tonawanda yards, which is now preeminently in order, after a long winter's siege upon the piles. Another week will place the yards in much better shape to fill orders than they have been during the past two months. Prices still rule firm, and we hear of little if any dropping. The manufacturers having held firm, there seems to be no alternative for dealers to do otherwise than follow suit or lose. Present indications would seem to settle the outlook for the spring trade here, viz.: that prices will vary but little indeed.

We quote railroad freights as follows:—

Tonawanda to Boston or New England points, per ton	$3 50
New York and Hudson river points	3 00
Jersey City, Newark, etc	3 00
Philadelphia, Baltimore, Wilmington, etc	3 00

CARGO LOTS—MICHIGAN INSPECTION.

Three uppers	$38 00@43 00
Common	17 50@20 00
Culls	11 50@12 50

Duluth.

YARD QUOTATIONS—CAR LOTS.

Finishing lumber, 1 to 2-in	$30 00@40 00
Flooring, dressed	16 00@30 00
Siding, "	15 00@18 00
Common boards	10 00@11 50
Scantling, 2x4	12 00
Timber and joists, according to size	11 50@15 00
Shingles	2 00@ 3 00
Lath	1 75

THE Montreal *Gazette* quotes deals to Liverpool at 60 shillings, and lumber to South America at $13@15 per 1,000.

Liverpool.

On Friday, April 29th, Messrs. Farnworth & Jardine offered by auction one cargo of St. John, N.B., spruce deals, about 20,000 Quebec pine deals, about 4,000 pieces of St. John, N.B., and Richibucto pine deals, with spruce boards, &c.

The attendance was limited to the local dealers, the country buyers, who usually form a good proportion, being conspicuous by their absence, and the competition for the spruce was of the most languid kind.

The autioneer went through the catalogue twice, but £6 15s. being the highest bid for any lot, the entire cargo of spruce was withdrawn. A parcel of 2-in. Quebec pine deals, 1st quality, was likewise withdrawn, £15 15s. being the highest offer, but at that price two lots of 2nd quality, 3 in. wide, 9 to 12 ft. long, found buyers. For 3rd quality there was more competition, and one consignment sold readily.

	Per standard. £ s. d.	£ s. d.
16 ft. 3×11	9 17 6	
13 " 3×11	6 11 6	
12 " 3×11	9 7 6	to 9 10 0
9 to 12 " 3×7 to 10	8 10 0	
13 " 16 " 3×12 " 22	10 2 6	

The St. John, N.B., pine deals were withdrawn, only £6 12s. 6d. being offered for them, and £6 2s. 6d. for the spruce boards, which also were taken in again.

A cargo of Halifax spruce deals, just arrived, sold at an average of £6 15s., and 800 to 900 logs of birch from same vessel at an average of 13¾d.

Glasgow.

On the 3rd of May, Messrs. Allison, Cousland & Hamilton, brokers:—

Halifax, N.S., birch timber, 500 logs, 14 to 15 in. average, sold at 1s. 2d. to 1s. 3¼d. per cub. ft., string measure—

Halifax, N.S., spruce deals—

15 to 23 ft. 15 to 19×3	1s.	per. c. ft.
15 " 25 " 12 " 14×3	11¾d.	"
9 " 21 " 12×3	11¼d.	"
9 " 26 " 11×3	11d. to 1s.	"
12 " 23 " 10×3	11½d. & 11¼d.	"
9 " 11 " 10×3	10½d.	"
12 " 26 " 9×3	11¼d. to 11¾d.	"
9 " 11 " 9×3	10½d.	"
12 & 16 " 18 " 8×3	10½d.	"

Halifax, N.S., spruce deals—

9 to 11 ft. 8×3	9½d.	per. c. ft.
9 " 11 " 7×3	9d.	"

Do. spruce battens—

10 to 16 " 7×2½	9¾d.	"
Do. scantlings, 10 " 18 " 6×3	9¾d.	"
Do. deal ends, 5 to 8 ft. long,	8¾d.	"
Do. " 3 and 4 ft. long,	8¾d.	"

Quebec pine, described as having got somewhat discoloured on board the vessel—

Deals, 2nd—

9 to 19 ft.	¾×3 1s.	2¾d. per. c. ft.
Do. 3rd 9 " 12 "	9×3 1s.	1d. "
Planks— 12 " 18 "	5 & 6×2 1s.	0½d. "
9 " 11 "	5 & 6×2	11d. "
6 " 8 "	5 & 6×2	9d. "
Boards— 12 "	10×1 1s.	1d. "
12 " 4 to	10×1	11d. "

THE TRENTON FIRE.

TRENTON, May 19.—Gilmour's mill, which was burned yesterday, was built in 1852, and has consequently stood for 29 years and during that time not a single conflagration of any magnitude occurred until yesterday. At one time no one had the slightest hope that any part of the mill could be saved, as the woodwork beneath the tin roof was all in a blaze, and the fire was raging among the machinery on the second floor, but the large force of men present, and several gentlemen from West Trenton, including the Mayor and firemen, determined to get control of the fiery element and worked with unflagging energy, some of them standing on the second floor in the very midst of the fire, doing their best to subdue it with buckets and hose.

On account of the tin roof no sparks flew, and consequently no damage was done to the lumber piles, although some of them were with. in 60 feet of the mill.

After the fire it was ascertained that not nearly as much damage was done as was at first anticipated, and it is now thought that the loss will be covered by the insurance, $75,000. All the boilers are intact, and only one of the engines damaged slightly by the roof falling in on it.

Mr. Gilmour left town yesterday for Quebec, it is said to confer with the other members of the firm with regard to the immediate rebuilding of the mill. In the meantime the new mill will be run night and day and employment will be given to a large number of hands preparing to rebuild.

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Saw Mills, Grist Mills and Shingle Mills
DOUBLE EDGERS, LUMBER TRIMMERS.

THE MIXTER SAW GUMMER IS KING.

MORE GUMMERS and SWAGES sold the past year than ever before. The great and constantly increasing demand for the "MIXTER GUMMER" settles the question of its efficiency and superiority over **all other Gummers in Market.**

The following is a fair sample of the many flattering testimonials which are constantly pouring in upon us:—

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DEAR SIRS—Your Patent, Automatic, Self-Feeding Saw Gummer is a perfect success.
Yours, &c., E. MORS & CO., Lumber & Timber Dealers.

WATSON, EFFINGHAM Co., Illinois.

GENTS—I am using one of your Patent Automatic Self-Feeding Saw Gummers at each of my three mills, and I would not take one hundred dollars for it if I could not get another like it.
Yours truly, WM. ANDERSON.

CORINTH, Miss.

GENTLEMEN—The Patent Automatic Self-Feeding Saw Gummer we bought of you just fills the *bill exactly.* We gummed a sixty-inch saw with sixty teeth, cutting on an average of three-fourths inch deep to each tooth, with one cutter without sharpening it.
Respectfully yours, WHEELER & WILLIS.

THE CUTTER OR BURR referred to in the above, (⅜ in.) cost **90 CENTS**, it takes one-half minute to each tooth, and the saw is gummed without removing it from the mandrel. ALL SAWY ERS know this is a great advantage, besides a saving in time.

We challenge **ANY** saw tool manufacturer in the United States to produce such an array of unsolicited testimonials as we have received for our GUMMER AND SWAGE.

Of course we have not room here for an extended list.

Our goods are now so well established throughout the country, that information can be easily obtained as to their practical working from any of the **Several Thousand** Sawyers who have them in use.

In short the MIXTER GUMMER is pronounced by *all* to be the "**BOSS GUMMER.**"

Send for circular and price list with cash discounts.

EWAN CHAIN for Sawdust Carriers, Live Rolls, &c. **SAWS** and Saw Furnishings.

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Wrought Iron Shanty Cook Stoves

The Best Article ever offered to the Trade.

I have much pleasure in drawing attention to my **WROUGHT IRON COOKING STOVE, for Shanty, Hotel and Boarding House use.** These Stoves are made of **Heavy Sheet Iron,** the top and lining of the fire-box being of **Heauy Cast Metal** and all the connecting parts of substantial **Wrought Iron Work.** The dimensions of these Stoves are as follows:—

SINGLE OVEN STOVE

Top surface contains six 10-inch holes, with ample room between, and one oven 16 x 24 x 26.

DOUBLE OVEN STOVE

The Double Oven has a top surface containing twelve 10-inch pot holes, with two ovens, each 16 x 24 x 26. One fire-box of suitable size for area to be heated. Below will be found Testimonials from some of the leading Lumbermen, who have used my Wrought Iron Cook Stoves since I ommenced manufacturing them. They are the names of gentlemen who are well known and eliable, and will carry more weight than any recommendation of my own could do.

The Best Stove I have ever Used.

PETERBOROUGH, May 31, 1880.

ADAM HALL, Esq., Peterborough. Dear Sir,—I have used your Wrought Iron Cooking Stove in our lumbering operations since its introduction here, and have no hesitation in saying that I prefer it to any other. For durability, economy and efficiency, where a large number of men are employed, it is the best stove I have ever used. You can, with confidence, offer it to hotels, boarding houses and lumbermen.
Yours truly, THOS. GEO. HAZLITT.

The Stove for Lumbermen.

PETERBOROUGH, June 1st, 1880.

ADAM HALL, Esq., Peterborough. My Dear Sir,—We have used your Wrought Iron Cooking Stove and find it is very satisfactory for lumber operations, especially so on drives. We can recommend it highly.
Yours truly, IRWIN & BOYD,

Gives the Greatest Satisfaction.

PETERBOROUGH, June 3rd, 1880.

A. HALL, Peterborough. Dear Sir,—I have had the Wrought Iron Cook Stove, purchased from you, in constant use ever since last fall, and it gives the greatest satisfaction in every respect. I can recommend them highly to any one who is in the lumber business. Very truly yours, GEO. HILLIARD, M.P.

EVERY STOVE GUARANTEED

All the necessary TINWARE and CUTLERY for Shanties suppied at the Lowest Prices.

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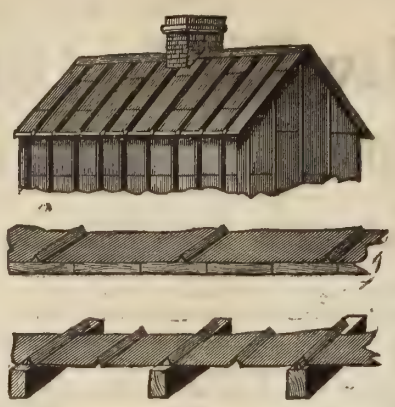

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The Bell Organs have just received the HIGHEST AWARD and SPECIAL PRIZE (Gold Medal) at the International Exhibition, Sydney, Australia, this year for their Organs over all the English and American makers. This along with the unlimited awards, prove that

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Medal and Diploma.....Centennial Exhibition, 1876
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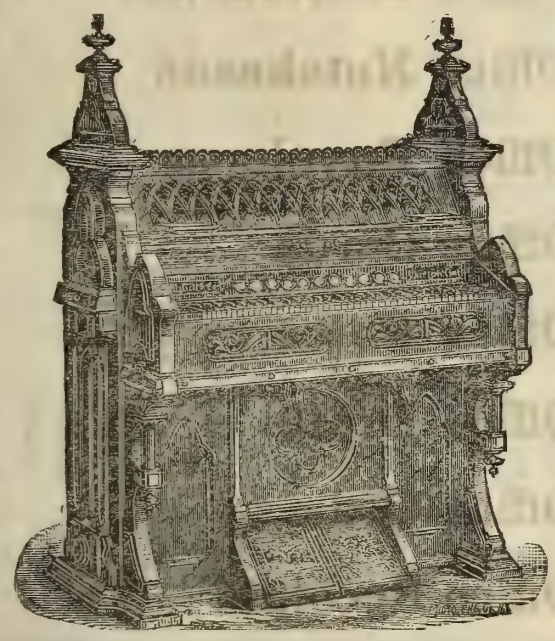

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The Bell Organ Manufactory is the Largest and Oldest in the British Empire, and the fact that we have sold nearly 15,000 proves that they are the best in the market. ☞We guarantee all our Organs for five years. Correspondence invited. Illustrated Catalogue mailed free.

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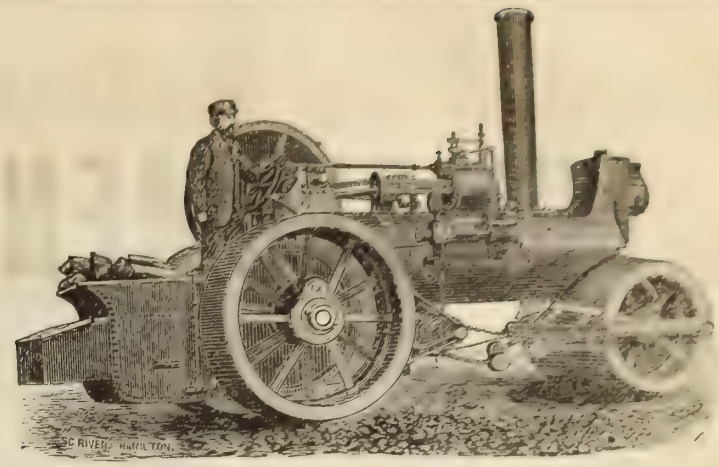

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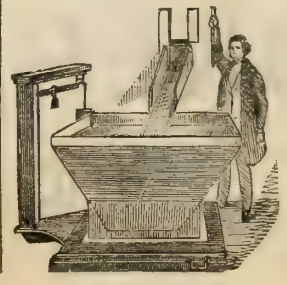

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I would also call special attention to my

Heavy Circular Saw Mills

and for STEAM MILLS, would recommend the Steam Feed, having put in several which are giving the best of satisfaction, as will be seen by the following testimonials:—

GRAVENHURST, August 20th, 1880.

WM. HAMILTON, ESQ., Peterborough.

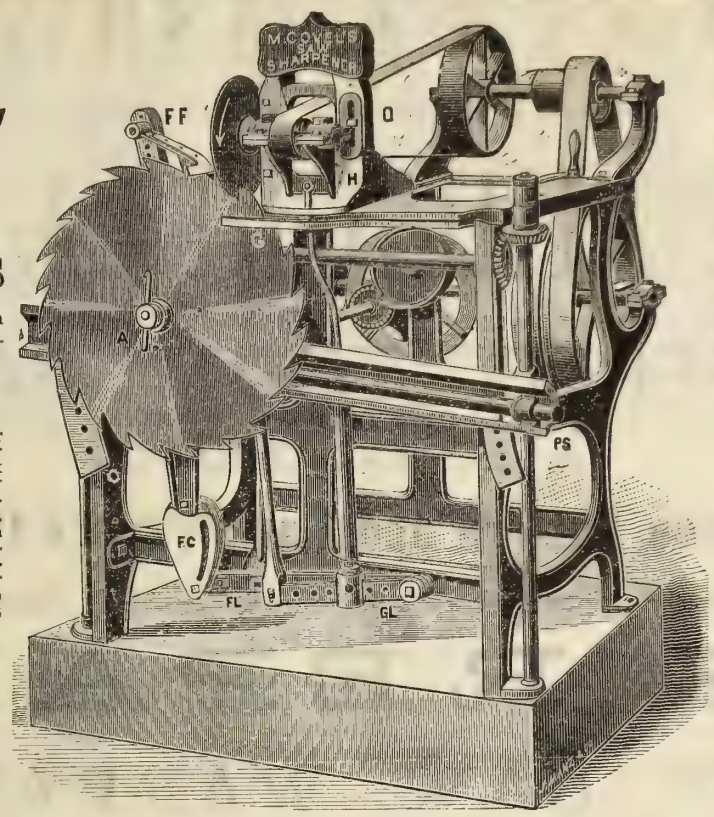
DEAR SIR—I have used your Steam Feed for near four months, and it has given me perfect satisfaction in every way; it is admitted by every person who has seen it work to be the best feed ever invented. Since I put it into my mill, I have not lost ten minutes time fixing anything belonging to it. I can cut 18 boards 13 ft. long in one minute. It can do much smoother and better work than the pinion feed. It is easily governed and reverses the carriages instantly. I am thoroughly satisfied with it and can recommend it to any person who has a Circular Saw Mill for cutting long or short logs. I consider I have cut more lumber than will pay for the Steam Feed since I got it than I would have cut had I not put it in.

Yours respectfully,
WILLIAM TAIT,
Lumberman, Gravenhurst.

TORONTO, August 11th, 1880.

WM. HAMILTON, Peterborough, Ont.

DEAR SIR—The Steam Feed you put in is working splendidly. Yours, &c.,
THOMPSON, SMITH & SON.



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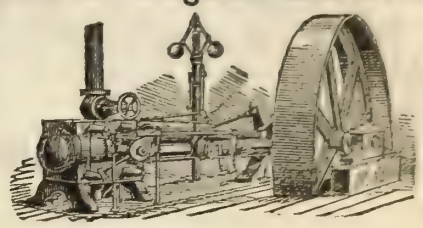

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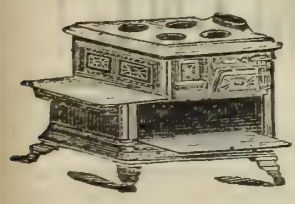
WILLIAM HAMILTON - - PETERBOROUGH, ONT.



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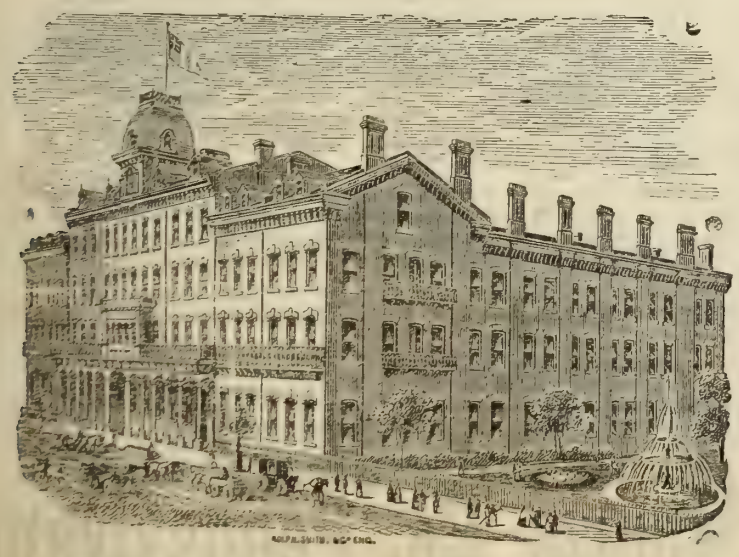

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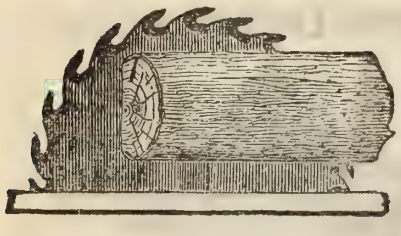

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EVERY SAW WARRANTED.

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EMERY WHEELS FOR SAW GUMMING!

Solid Emery Wheels are now almost in universal use for the purpose of gulletting and gumming saws. Statistics show from 25,000 to 30,000 saw-mills in the United States. Many of these run only a single saw each. A one-saw mill would use one or two wheels a year, costing $3 to $4 each, and when such small mills order single Emery Wheels from the factory, the express charges often equal the cost of the wheel. There was a time when the quality of Emery Wheels was so uncertain, and the demand so fickle, that storekeepers could not afford to carry them in stock. Now, however, Saw Gumming Wheels have become as staple an article as Files, and every dealer in saws, Hardware and Mill Supplies can afford to carry a few dozen standard sizes in stock. Large dealers order stocks of $500 to $750 worth at a time. Saw Gumming Wheels are used with the edge (or face) square, round, or beveled. Probably seven-eighths of all in use are beveled.

The principal sizes are:

8x¼, 8x⅜, 8x½ } ⅝ in. hole. 10x¼, 10x⅜, 10x½, 10x⅝ } ⅝ in. hole. 12x¼, 12x⅜, 12x½, 12x⅝, 12x¾, 12x½ } Holes, ⅝, ⅞ and 1 inch.

Probably more wheels 12x⅜, 12x½ and 12x¼ are used than all the other sizes together. Saw Gumming Wheels are used, however, of all sizes up to 24x1½. The most frequent complaint is that Emery Wheels harden the saw so that a file won't touch it. The answer is that you don't want a file to touch it. An expert workman will shape and sharpen the teeth with an Emery Wheel, leaving the teeth *case hardened*, in which condition the saw will cut about 33⅓ per cent. more lumber than a soft saw will. Those who want to use the file, however, have only to touch the saw *lightly* a second time (after going all over it once), and this second touch will cut through the case-hardened scale.

A QUESTION OF QUALITY.

Thirteen years of experience as makers of, dealers in, and actual users of Emery Wheels, have led us to a decided opinion as to what quality is the best. We prefer for almost every use an "Extra Soft" wheel like the "Pocono." We believe that money lost through the rapid wear of the wheel is more than made up by the money saved on wages. As we cannot get every one to adopt our views, we make several qualities, so as to meet their views. We say to those who think they can only be satisfied with some other make of wheels (not Tanite), that we can furnish qualities *to match* any and every other make. If you have got used to some special quality of wheel, let us know what it is, and we can send you *a Tanite Wheel of similar quality*. Our *regular* classification of Saw Gumming Wheels is as follows:

CLASS 2. MEDIUM—HARD.—This Wheel is THE STANDARD Saw Gumming Wheel all over the world. Probably seven-eighths of all the Saw Gumming Wheels used are "Class 2." It cuts fast and keeps its shape well. Some think it too hard, some too soft. We prefer the "Pocono."

CLASS 3. MEDIUM—SOFT.—The same as to coarseness and fineness as "Class 2," but a *softer*, and therefor freer cutting wheel.

CLASS "POCONO." EXTRA SOFT.—This Wheel we prefer to all others. It is both *finer* in grain and softer than either of the above. As a Saw Gumming Wheel, Class "Pocono" is specially suited to those practical and experienced Sawyers who know how to grind with a light touch, and who want a free cutting wheel that will not create much heat.

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VOL. 1. **PETERBOROUGH, ONT., JUNE 15, 1881.** **NO. 16.**

FORESTRY AND ABORICULTURE.

BEING THE FOURTH CHAPTER OF THE REPORT OF THE ONTARIO AGRICULTURAL COMMISSION.

Planting Waste Lands.

For planting on waste lands, either inaccessible to cultivation or of a soil too poor to repay cultivation, the European larch has already been mentioned. Mr. Leslie, referring to this tree, says :—

"It is suited to our climate, being perfectly hardy, and very easy to transplant in the spring. It requires early transplanting, though later in the season it will thrive if transplanted, provided the roots are kept moist. As a rule, however, it should be planted as soon as the frost is out of the ground, or as late in the fall as possible before the permanent freezing of the ground. It can be imported at about the same price as the Norway spruce.

"I would not recommend planting them after they attain a height of more than eighteen inches or two feet ; they are a little impatient of being moved after that time. There is not a large supply of them kept in this country ; we keep a fair supply ourselves. If very large quantities were required, as for instance, if railway companies should go into their cultivation, they would have to be imported to meet the demand.

"The firm of Douglas & Co., Waukeegon, in the States, grow them by the million. The prices in the old country, however, are less than those in the States, and in either case there is a duty on the trees when imported here."

For belts, Mr. Leslie would plant European larches three or four deep.

"Hitherto," he says, "the tree has been used more for shelter than anything else. I have no doubt of its success under good management. In our own place we have some trees thirty feet in height."

Cost of Tree Planting.

With regard to the cost of trees purchased from the nurserymen, Mr. Beadle says :—

"As to the cost per acre of such forest planting, young black walnut trees can be bought of the nurserymen who have been growing them, at about $12.50 or $12 per hundred for trees about four feet high. Chestnuts can be bought at about the same figure. I know of no plantations where the hard maple, could be bought at any figure. Nurserymen have confined themselves mostly to the horse chestnut and mountain ash for tree planting."

Mr. Leslie says :—

"The American elm, the Scottish elm, and the English ash are also very desirable. Those that I have named I regard as the very choicest. In large numbers I imagine these trees could be got for about twenty-five cents apiece when about eight feet in height, which I regard as the proper size for planting. They would be trees raised in this country, but they would have to be nursery grown, or transplanted from the woods."

Of the cost of Norway spruce Mr. Beadle says :—

"It is grown by nurserymen both in Europe and America by millions. They can be bought from one to two feet high for $10 to $15 a hundred, and if taken younger can be bought for still less."

Mr. Leslie, on the same point, says :—

"We sell these imported trees at from $30 to $40 a thousand—three or four cents apiece—that is to say the 15-inch ones. The 18-inch ones would be transplanted two years in this country and cannot be sold for less than $60 a thousand. If large numbers were taken they could be sold at a much cheaper rate, say 25 per cent. off. If we could depend upon getting them every year in the same condition, they could be sold cheaper still, but we have to take an average."

The difference in age and size is, of course, an important factor in calculating the cost. Dr. James Brown in his evidence says, with regard to the cost of imported trees :—

"I have been just now at Leslie's nurseries, and find there that such plants as the Scotch pine and other sorts of pine would cost about five cents each. To plant an acre at that rate would cost $50 for plants alone, independent of planting them. This rate is reckoned when planting the trees six feet apart. I think I would advise planting them as close as that. I don't think there is any reason why the price could not be greatly reduced by having extensive nurseries, in fact there is no doubt about it.

"Mr. Leslie said that if he had extensive orders for them he could afford to sell them cheaper, but at present he has no encouragement to do so. In the matter of reclothing the country with forest trees, the first thing essential is to establish large nurseries for the purpose of raising young trees. I think that trees suitable for replanting could be raised so as to sell on an average for $8 a thousand.

"You can get the same plants in Scotland for a third of that. The difference between the price here and there would be owing to the difficulty of rearing them here on account of the severity of the winter. In Scotland they require no protection, but they would require to be protected here while they were young."

In reference to the question of cost, Mr. Leslie in his own evidence repeated the remark he had made to Dr. James Brown. There can be no doubt that trees can in large numbers be grown at a very small cost indeed, but, so far, in Canada, between the very limited amount of planting that has been going on and the accessibility of woodlands affording a cheap supply of trees of some sort or condition, the nursery demand has been comparatively insignificant, and no sufficient encouragement has been given to induce nurserymen to raise forest trees in great numbers. As to the actual cost of planting a given area Mr. Leslie says :—

"The trees would cost about 5 cents each, say 6 cents with the planting. In other words, the north and west sides of the field could be protected at a cost of very little over $6 an acre, or say $7.50 with the planting."

In his evidence on general farming and other subjects, Professor Brown, of Guelph, gave the following as his estimate of the cost of planting out forest trees, and his opinion as to the mode of planting. He said :—

"Upon the subject of forestry, I will show you what it costs per acre to put down young trees taken from your own or a neighbor's bush, a method of replanting which can be adopted at the least possible expense, and I think with the greatest possible success.

"In selecting trees for replanting, it is best to keep on the small side. It is a great mistake to go into six or eight feet trees if you want rapid success. Two or three feet trees will ultimately do much better. I think it is an important point gained if we can show the Canadian farmer how he can be his own nurseryman and do his own replanting.

"There are thousands of young trees in every farmers' neighborhood which need cost him nothing but the expense of collecting them. If he has to pay ten cents to a nurseryman for every tree he plants, he will do very little in that way.

"I have been in the habit of planting one and a half million of trees a year and they did not cost more than ten shillings and sixpence a thousand, and if our Government or private parties took the nursery management of such trees, I think they could be produced in Ontario at less than eight dollars a thousand.

"I have started an experiment upon this subject upon the Model Farm at Guelph, and I have found the cost to be as follows per acre :—

Clearing and preparing the ground	$ 9 44
Digging pits	8 88
Fencing	4 75
Planting	11 50
Pruning	0 75
Mulching	2 25
Taking trees from the forest	18 50
Heeling	0 50
Total cost	$56 57

"If the farmer does not estimate the value of his own labour, and of the labour of his horses, you may reduce that about one-half.

"I do not believe in manuring forest trees—I have never seen any good effect from it, and I am expressing not only my own experience, but the experience of others dating fifty years back.

"We have had evidence of great weight that trees should not be planted less than six or eight feet apart, and that gives about 900 trees to the acre. We planted that number this season, and there are now 715 alive and doing well, showing an actual death-rate of one-fifth. The deaths, however, occurred principally among the pine and spruce, apart from these, the deaths were comparatively few.

"In planting strips of wood for the protection of crops, I cannot recommend anything but standard trees."

Effects of Forests on Moisture.

The effects of forests on rain and snow fall is a subject that has attracted much attention in some European countries, and is admitted to be one that is being practically illustrated in our own experience, although, up to the present time, no such system of experiments or inquiries have been adopted as to identify, with scientific accuracy, the relations of the clearing of the land to be diminished moisture. Still, everybody mentally attributes the latter result to the former cause. Something more may be said in regard to this matter when the evidence on meteorology in relation to agriculture is under review. Meantime, the following extracts from the report of Dr. Hough, already referred to, will describe, in a few words, the part played by forest trees in relation to this branch of nature's economy :—

"It is a matter of common remark that our streams diminish as the woodlands are cleared away, so as to materially injure the manufacturing interests depending upon hydraulic power, and to require new sources of supply for our State canals, and for the use of cities and large towns. Many streams once navigable are now entirely worthless for this use. The mode in which this influence operates will be readily understood when we consider the effects of forests upon the humidity and temperature of the air.

"A deciduous tree, during the season when in foliage, is constantly drawing from the earth, and giving off from its leaves a considerable amount of moisture, and in some cases this amount is very great. This change of state from a fluid to a gaseous condition, is a cooling process, and the air near the surface, being secured from the sun and from the winds, becomes, by this means, so humid that a rank, succulent vegetation often springs up and thrives, which in an open field would wither and perish in an hour. The air being thus charged with moisture and cooled, does not take up by evaporation the rains which fall, and the soil, being more open, readily allows the water from melting snows and from showers to sink into the earth, from whence a portion appears in springs and in swamps, which give rise to rills and streams.

"The air at all times holds more or less watery vapour in suspension, and its capacity for doing so is increased as the temperature is raised, not by a steadily gaining rate, but more rapidly as the heat is increased. There can be no evaporation when the air is saturated with

moisture, and no deposit of water in any form until the temperature is reduced to the point of saturation. It is not yet determined as to how far the cooling and moistening influence of a grove may extend. It must depend upon many circumstances, and especially upon the slope of the surface and the direction of the winds. The effect is often apparent to the eye from the freshness of the herbage in adjacent fields for many rods in width."

"The effect of woodlands in retaining snows where they fall, and in delaying their melting in the spring, has been everywhere observed in snowy countries. In such localities the snow cannot be drifted by the winds and when it melts it disappears slowly, sinking into the soil rather than flowing off upon the surface. The effect of this delay in checking a too-early appearance of fruit blossoms, cannot be mistaken. The result is in fact similar to that of considerable areas of water, such as our northern lakes, along the borders of which, and especially on the lee-side, fruits are found to flourish with the greatest success. In a country interspersed with clumps and belts of woodlands, the snows drift less and their melting more evenly over the surface cannot fail to be beneficial to the interests of agriculture, and more especially to meadows and pastures."

Concluding Remarks on Forestry.

The Commissioners during the progress of their investigations under this head, have been profoundly impressed, not less with the importance than with the magnitude of the subject. In fact, had the whole time devoted by them to the discharge of their varied duties been occupied in inquiring into the question of forestry in its many aspects, it might have been well spent. They feel that the evidence they have taken rather suggests further examination into, than exhausts the whole subject.

The arrangements and laws relating to forestry in Europe, as well as the progress of tree planting in the United States, in which direction an active movement has been going on for some years—would have been matters well worthy of close observation, and the Commissioners respectfully recommend that information thereupon should be obtained by such methods as may appear to the Government to be most convenient and effectual.

Possibly such information might assist in the solution of the question frequently raised in the course of this inquiry, By what means can tree planting by individuals or corporations be most successfully promoted?

Government assistance in the shape of money grants, exemptions of planted lands from municipal taxation, and the establishment by the Government of large forest tree nurseries have all in turn been suggested.

The Commissioners would be reluctant to advise the expenditure of any considerable sum of public money without having before them some scheme, the details of which had been carefully examined and worked out.

The subject is a new one to the minds of most of our people, and it is rather by the creation of public interest in the question, and a sense of personal responsibility with regard to it, that the ground work of any future plans must be laid.

Meantime the Commissioners are glad to be informed that the Fruit Growers' Association of Ontario, has included forestry and arboriculture in its programme of operations, and that the Government have given some encouragement to this step, while at the same time experimental tree planting has, under the auspices of the Association, been commenced at the Model Farm at Guelph. A few townships and urban municipalities have also offered inducements to the planting of streets and concession lines, All these are indications of a gradual awakening to a sense of the necessity of something effectual being done.

With the facilities that exist in all parts of Ontario, for obtaining a supply of materials close at hand, organizations in townships or school sections for planting a given number of trees, within a given period of time, and at the smallest possible cost, should not be difficult.

It has also been proposed that school-house lots, now usually presenting a most bare and uninviting appearance, might be planted with forest trees, and a small premium or reward be given to those schools, in a district, whose trees had been most successfully cultivated and best preserved for a given period.

It has further been suggested that interest might be excited, and information imparted, by lectures delivered by competent persons on forestry in connection, perhaps, with entomology and ornithology, so far as those topics affect the farmer and fruit grower.

Such lectures might be delivered in schoolhouses, under arrangements made by the county inspectors, the senior classes in the school, and the public generally, being invited to attend.

In treating of these subjects, however, pictoral illustrations would be indispensible, and a knowledge of the colours of leaves, insects, and birds would also have to be imparted. In order to accomplish this, and as the lectures would have to be delivered in the evening, the "magic lantern" might be brought into play, the novelty of such exhibitions assisting to ensure to the lecturer an audience.

The first cost of preparing transparencies would be considerable, but the other expenses of such a scheme need not be large, while the preparation for the work, of young men of ordinary ability and culture, would not be a difficult task, in view of the materials already at hand.

The objection raised to any proposal to add such studies to the already rather overcharged public school curriculum would be avoided, while parents, teachers, and children would, at one and the same time, be interested and instructed.

The Commissioners, in conclusion, may not travel beyond the bounds of their duty if they respectfully urge upon the Executive the propriety of steps being taken with regard to the preservation of the timber lands of the Province still in possession of the Crown, and not subject to the regulations affecting the pine timber forests.

Only by some action of this kind can waste and destruction be staid, and the stern necessity—which in other countrtes at this moment has to be faced—be avoided, of replacing, by slow methods and at enormous cost, what has been recklessly and unreflectingly destroyed.

A LUMBER OPERATOR'S DEFALCATION.

Charles Smith was operating during the past season for the firm of Guy, Bevan & Co., of St. John, for whom he had engaged men to stream-drive on the South-west Miramichi. These lumberers are even now oblivious of all that has happened, with regard to their prospect of receiving the slightest pittance for their whole spring work, and they are, perhaps, now toiling in the hope of getting wages which may never be paid, so that the money which was hard earned by them, in steady work for the whole spring, will, in all probability, be lavished away at the whim of a defaulter and absconder.

Smith had a contract with Guy, Bevan & Co. to get out logs by the thousand, and he drew upwards of $5,000 to pay driving wages. On Sunday last he left the city, his wife being very ill at the time, and drove to Woodstock, where he sold his horse and wagon to Mr. Glidden, and took the train for the West. Mrs. Smith died on Tuesday. Their son was at work on the drive, and on hearing of his mother's death, he went to Newcastle to get money to come home; but on finding his father had drawn it all, he was obliged to borrow enough from his fellow-workmen to come home with. Mrs. Smith was buried yesterday. Nobody suspected anything was wrong until after Mrs. Smith's death, when inquiries were made as to her husband's whereabouts, and the foregoing facts came to light.

A number of persons in this vicinity are losers by Smith. Among them is J. McCoy, of St. Mary's, to whom he owes $1,200 on a contract for logs. Mr. McCoy thinks he can hold the logs. Cameron & McCarthy lose about $400; S. D. Macpherson upwards of $100; J. McMurray $75, and others. Messrs. Balloch Brothers, of Florenceville, will lose considerable by him, as they had sent him a quantity of oats for sale, which he disposed of. Smith's son and daughter, who remain here, moved away all their furniture during last night.—*Fredericton Capital.*

WIRE ROPE FOR TRANSMITTING POWER.

BY HENRY EWING.

I suppose there is scarcely a manufacturing establishment in the country, where, at times, the ability to transmit or convey power to some isolated or distant building, would not only be of great convenience, but as well a source of profit to the owner. Under ordinary circumstances this is impossible, except by purchasing a small engine or water wheel, the expense of setting and operating which becomes a grevious tax. In such cases, wire rope becomes an invaluable aid, and as its capabilities and requirements are, really, but half understood, perhaps some of the readers of the *Lumber World* may find something in this communication interesting and of utility to them.

The distance to which power may be transmitted by wire rope ranges from fifty or sixty feet up to something more than two miles. It commences at the point where a belt becomes too long to be used profitably, and can thence be extended almost indefinitely. In point of economy, it costs only one-fifteenth of an equivalent amount of belting and the one-twenty-fifth of shafting. This method was first introduced, both in Europe and America, about the year 1850. The development it has received in this country is but trifling; in Europe, however, it has been immense, numbering at the present time over 2,000 permanent applications, and as many more of a temporary nature.

In many factories, long counter-shafting, with heavy bevel-gearing, can be saved by using a rope; the farther off the shaft we wish to drive, the better the arrangement will work.

When neighboring property cannot be bought, perhaps that across the street can—yet the trouble and expense of digging up the street to lay down a line of shafting is sufficient to deter one from the purchase. For such a case, a remedy is here presented. A little endless rope passing through a couple of slits in the window casing of an upper story, across to the story opposite, will do all the work, and none of the passers by will be any the wiser for it. A belt would require protection from the weather, but the rope does not, and can hang free in the air. From an engine in the basement, power can be readily conveyed to the upper storeys; it is necessary, however, that for a certain distance the rope should hang horizontally, in order to gain the required tension. The utility of this mode of transmission is so manifest, and the convenience afforded by it has been so strikingly exemplified in localities where hardly any other system would have been practicable, that it is justly attracting the attention of the manufacturing public more and more as its merits become known.

The range in the size of wire ropes is small, varying only from three-eighths inches to three-fourths inches diameter in a range of three to two hundred and fifty horse-power. The ropes are always kept on hand, and can be spliced endless at the factory; or else directions are given to splice them, whenever an endless rope cannot be put on direct. In regard to cost, they are the cheapest part of a transmission. For instance, a No. 22 rope, conveying, say twenty-five horse-power, costs nine cents per foot, whereas an equivalent belt costs about $1.40 per foot. Where a rope transmission has to be constantly at work, it is good policy to keep a spare rope on hand, ready spliced, so as to avoid delay. Their duration is from two and one-half to five years, according to speed. For the smaller powers it is advisable to take a size larger, for the sake of getting wear out of the rope; although it must be borne in mind that a larger rope is always stiffer than a small one, and therefore additional power is lost in bending it round the sheave. Small ropes are made with hemp core to increase their pliability.—*Lumber World.*

ZOPESA.—A healthy man never thinks of his stomach. The dyspeptic thinks of nothing else. Indigestion is a constant reminder. The wise man who finds himself suffering will spend a few cents for a bottle of *Zopesa*, from Brazil, the new and remarkable compound for clensing and toning the system, for assisting the Digestive apparatus and the Liver to properly perform their duties in assimilating food. Get a 10 cent sample of *Zopesa*, the new remedy, of your druggist. A few doses will surprise you.

Yellow Oil is *par excellence* the remedy for Pain, Lameness, Rheumatism, Croup, Deafness, Burns, Frost Bites, Stiff Joints, and all flesh wounds. Any medicine dealer can furhish it.

A WALL STREET A. B. C.

Never take the bull point in bear times, nor a bear point in bull times.

Buy on a heavy break and sell on a sharp advance.

Have margin enough to hold on to your "longs" or "shorts." Every dog has his day on the "street," and you will be sure to make money if your staying qualities are good.

During dull or bear times have nothing to do with clicked, unknown stocks, or those companies in which there is only a small number of shares, the merits of which are known only to a few; it is better to deal in securities for which there is always a market.

Confine your operations to two or three stocks of which you have made a study.

The most conservative way to speculate is to keep cash in hand and operate only three or four times a year, buying dividend-paying stocks outright when a break occurs, selling again when the market goes up. There are never less than two breaks in the course of a year, which occur usually in the spring and fall.

Remember that there is a rythmic motion in prices; whenever they go up very high they are sure to rebound, and *vice versa*.

A dull stock market is a weather breeder and generally brings on lower prices.

Sell on the rallies in a bear market and buy on the setbacks in a bull market. It is safer to be a bear over Saturday nights than a bull.

The accidents of the market are generally in favor of the bears.

In the long run it pays better to be a bull than a bear. We live in a prosperous era, in which money is cheapened and prices are advancing.

When any disaster occurs to any one property in a certain section, or representing a certain interest, it is safe to sell properties similarly situated. If there is a sudden drop in St. Paul, sell Northwest; if in Lacawanna, sell Delaware & Hudson.

For permanent investments or slight fluctuations, deal in bonds and securities of communities in which there are diversified industries, in preference to sections of the country where everything depends upon one interest. For instance, Central and Lake Shore will be steadier in price than the northwest and southwest stocks, which are high priced only when the agricultural classes are prosperous.

Depend upon your judgement rather than upon your special points, and do not believe anything you hear.

If you stand over the tape every day, you are pretty sure to lose your money. The commissions will eat you up.

If you have been unsuccessful in other business, Wall street is no place for you.

Pay little attention to the opinions of the newspapers; they are generally in the interest of big operators, not of the outside public.

All excited bull markets end in a break.

The close of a bear campaign is marked by a semi panic.

Look out for a reaction on the third day of a heavy break.

Finally, if you are wise and have any repectable calling, never buy what you can't pay for or sell what you have not got. In other words don't speculate.

It is reported at St. John that Chas. Smith, a well-known lumber operator who resided and operated on the Miramichi during last season for Messrs. J. & J. Stewart, has left the city. He is said to have drawn on Messrs. Stewart for upwards of $5,000 to pay drivers' wages, and the statement of many lumbermen is that they have not been paid. Mr. Smith is known to be largely indebted.

"Their Name is Legion"—the people who praise that matchless medicine, **Burdock Blood Bitters**. It acts at once upon the Secretions, the Bowels, the Liver, the Skin and the Kidneys. It purifies the Blood, dispels all foul humors, and strengthens the nervous and debilitated system. No known remedy can do more. Try it and be convinced.

A Cough is usually the effort of Nature to expel some morbid matter irritating the air passages of the lungs. It may, however, proceed from an inflamed or irritable condition of the throat, a slight rash or humor often being perceptible. Let the cause be what it may, the remedy should be Hagyard's Pectoral Balsam. A purely vegetable Balsamic throat and lung healer. For sale by all dealers in medicine, at 25 cents per bottle.

JOHN THOMPSON, OF LONGFORD.

We are indebted to the Orillia *Times* for the following notice of the late John Thomson, Esq., of Longford Mills, which we are sure will be read with more than a passing interest by the readers of THE CANADA LUMBERBAN, and especially by those of them, and they are not few, to whom Mr. Thomson was personally known. Short as the career of THE CANADA LUMBERMAN has been, the present publishers feel that by his death they have lost a good friend—one who showed his sympathy with our undertaking not by words, but by putting his hand in his pocket and sending us a year's subscription for half a dozen copies to be distributed amongst his employes.

No event in the history of Orillia has created a feeling of such intense gloom, of such universal and spontaneous regret as the death of Mr. Thompson, of Longford. When word came on Friday, the 27th ult., that he was ill in Toronto we were sorry that he should have been taken down away from home, but no one anticipated the sad termination which has so moved the sympathies of the people of this neighborhood. He left home on Thursday, the 26th, and as if to emphasize the generous character of the man it is now known that his last journey on earth was taken in the interests of a friend. He complained of slight illness before leaving, but it was not allowed to interfere with his plans. To some friends on the train on the way down he expressed a fear that he was going to be ill, and before reaching Toronto the symptoms had increased, but not sufficiently to alarm either them or himself. On the following day he was so much worse that a return to Longford was not thought advisable, and a telegram was despatched announcing his condition. Mrs. Thomson went down the same afternoon, and on the following day the eldest son, William, joined them. He continued to grow worse, and during Sunday and Monday was attended by the best medical skill the city afforded. On Tuesday he was considered better, so much so that William returned to Longford expecting that in a few days he would be so much improved as to permit of his return home. It was not until Thursday night that the worst was apprehended, and a special train was despatched to Longford for the children. The train passed here early on Friday morning, Mr. Millar going down with the others. They found their father conscious but dying. All day Friday the telegraph office here was besieged with anxious enquirers, and late at night they dispersed with the melancholy satisfaction of knowing that their friend was still alive, but with little hopes of the morrow. On Saturday afternoon more hopeful messages arrived, and for several hours it was thought that the crisis was past. Mr. Millar was attentive to every enquiry, and as each turn in Mr. Thomson's condition took place it was promptly telegraphed to the anxious hundreds at Orillia and Longford. About nine o'clock on Saturday evening all hope was abandoned, and at half-past eleven John Thomson passed from this world to the other. His last drive was down, the boom was cut, and the spirit of a noble lumberman floated out into the broad ocean of eternity.

It was not until Sunday morning that his death became generally known. A sense of personal loss was experienced by every one, both here and at Longford. It is impossible to express the full intensity of the feeling. Mr. Thomson was not only known and esteemed; he was loved. To all of us it was as if a brother was stricken down. About half-past two o'clock on Sunday afternoon a special arrived at Longford with his remains. All the mill employees and neighbors were at the station, and as the coffin was taken from the train strong men wept like children. It seemed so sudden and so terrible. Only a few days before he had gone away full of life and hope for the future, bright and cherry as he had been always, with his honest, manly countenance beaming with kindly good nature. And here he was back to us, a bit of lifeless clay. It was sudden, and it was terrible. Scores of people drove over from Orillia without any clear notion of why they went; it seemed as if they must go if only by their presence to testify to their great grief and misery to proclaim their sympathy. Early in the day flags were flying at half-mast all over town and at the mills at Longford.

On Monday morning the Mayor thoughtfully addressed a circular letter to the business men of the town, requesting that they would close their places of business during the afternoon of the funeral. The request was probably unnecessary, but it was none the less an indication of public feeling.

The funeral was the largest ever seen in this part of the country. Friends from a distance came in by the *Lady of the Lakes*, from north and south on the Northern, and from north and south on the Midland railways. Every place of business on Mississaga street was closed at twelve o'clock, and many of them heavily draped in mourning, including the leading hotels. Shortly after one o'clock the *Lady* put out from the wharf here with between two and three hundred on board. Mr. Sanson also ran the *Carriella*. Arriving at Longford it was found that a large number had already assembled. The employees, to the number of about one hundred and fifty, had provided themselves with badges of mourning and were massed together to take their place in the procession. Many of those who arrived by boat took advantage of the opportunity to view the remains, after which Rev. K. Creighton read a lesson from the Psalms and Epistles. The large congregation, who had assembled on the verandah and in the large space in front of the house, then joined in a hymn, which Mr. Gray announced to have been a favorite one of the deceased's. Rev. Mr. Beattie, of Port Hope, offered up a fervent and eloquent prayer. While a student Mr. Beattie had been placed over the Longford congregation for several months, and had thus an opportunity of becoming intimately acquainted with Mr. Thomson's family. A strong friendship was then formed, which has remained unbroken ever since. Both Mr. Beattie and Mr. Gray addressed a few words to those present, bearing particularly on the eminent virtues of their deceased friend and pointing out the lesson to be learned from an honorable, upright life. Rev. Mr. Currie closed the service by a short prayer. Soon after the pall-bearers appeared with the coffin, the line of procession was formed, and the large assembly of mourners and friends slowly wended their way to the wharf. Between five and six hundred returned on the boat. At the Orillia wharf an immense concourse had congregated, the larger proportion on foot, but many in carriages. The members of the corporation attended in a body. Here the procession was again formed, probably the most striking and suggestive feature of it being the horse and phæton used by Mr. Thomson in driving to and from the mills, led by the faithful Hughey. About fifty carriages brought up the rear. Mr. Gray conducted the short service at the grave, and all that was mortal of the lamented deceased was committed to the earth.

The pall-bearers were Messrs. R. D. Ewing, J. B. Smith and Capt. Wm. Hull, of Toronto; Robert Thompson, of Hamilton; Wm. Hamilton, of Peterborough; Jas. Macpherson, of Rama; and Dr. Corbett and Melville Millar, of Orillia. The lumbering interest was largely represented, among others being Mr. J. E. Craig, Albany, N.Y.; Messers. Silliman, McIntosh, E. A. Smith, Alex. Christie, Wm. Kero, McArthur Bros., Robert Smith, ex-Ald. Mutton, P. A. Scott, S. C. Kenedy, Joseph Oliver, McCool and Kent, of Toronto; Allan Gunn, Peter McIntosh and O. F. Wright, of Barrie; Geo. W. Taylor and Isaac Cockburn, of Gravenhurst; Jas. Scott, J. Else and Henry Lovering, of Waubaushene; A. Marshall and E. Robinson, of Washago. There were also present, Messrs. A. P. Cockburn, M.P., Muskoka; Geo. Wheeler, M. P., North Ontario; Thos. Paxton, ex-M.P.P., Isaac Gould and Widdifield of Uxbridge; Chas. Robinson, of Beaverton; J. McL. Stevenson, J. S. Carnegie, Bank of Commerce, Chas. Ross, A. Arnall, Fulljames, Wm. Boys, King, McDermott, Radenhurst, Barrie. The Northern Railway was represented by Major Greig and Messrs, Webster, Kerr, Harvie and Marpole. Mr. John Bertram, of Dundas, and Mr. George Bertram, Toronto, were also among the prominent friends of the deceased. The Rama Indians turned out in large numbers.

Mr. Thompson was born in Haddingtonshire, Scotland, in 1821. In 1854 he came to Canada, and settled at Peterborough, going into the mercantile business. He soon afterward engaged in the square timber trade, and in 1867, with Mr. Melville Millar as a partner, he came to Longford and established the timber business now so well and honorably known in every lumber market on the continent. With other lumbermen he went through the deep waters of the depression, and manfully and successfully struggled against the difficulties of that period. Having carefully and laboriously built up one of the finest and most profitable properties of the kind in the Province he had already contemplated retiring from business, and now it is an open secret that at the time of his death he was in negotiation with a company for the purchase of Longford at a price that would have enabled him to live the remainder of his days in affluance and free from every care. Mr. Thompson was a pronounced Liberal in politics, and at the recent convention in North Ontario was offered the unanimous nomination of the party as their candidate for the Local Legislature. We are in a position to state that had he accepted there would have been no opposition to his election.

Mr. Thompson leaves a wife and seven children to grieve over a loss that is yet imperfectly realized. It is impossible to conceive of a more united and affectionate family. Last January Mr. and Mrs. and Miss Thompson visited Scotland and England, the latter remaining with an uncle in Manchester, with whom it was intended to spend the summer. That was the first and only break in the family tie, and so strongly did Mr. Thompson feel it that it was with difficulty he was persuaded against returning to Manchester before sailing and bringing his daughter home with him. She is now on her way to Canada, alone, sad and grief stricken.

It will afford a great deal of satisfaction to many friends at a distance to be assured that Mr. Thompson's business affairs were left in good shape, and that his death will not interfere with nor complicate the management of the immense concern he had built up and conducted so successfully.—*Orillia Times.*

ST. JOHN, N.B.

From our Own Correspondent.

GENERAL REMARKS.—During the past fortnight there has been very little calling for special notice in our lumber business. As intimated in our last, the change in regard to water supply has resulted, so far as we can learn, in clearing the streams generally of their freight of logs, at least no complaints are being made from that quarter. Deals from the country mills are coming in freely and meeting ready sale at from $8.00 to $8.50 per M. sup. feet. In and about the city the operations of sawing and shipping are moving along in their usual steady course.

STEAMSHIPS.—One of the most noticeable features of the deal trade at this port the present season, is the large number of ocean steamships which have been engaged in loading deals here for various ports in Great Britain. It is true that deals have been shipped here by the regular "liners" for a number of years, but only in small quantities; whereas, the present season we have had the largest class of freight steamers carrying full cargoes of deals, varying between 600 and 700 Peterburg standards each, thus showing how steadily, but surely, steam and iron are supplanting our wooden sailing ships in the ocean carrying trade.

FREIGHTS.—The freight market continues very quiet, with no material change in rates.

SHIPMENTS.—The shipments of deals and other sawn lumber are as follows:—

For Europe	20,031,000	Sup. ft.
" United States	2,295,000	"
" West Indies	577,000	"

St. John, N.B., June 4th, 1881.

A BARGAIN—GRIST AND SAW MILL FOR SALE, paying 12 per cent. clear; price $9,000; and above percentage guaranteed. Apply to

JOSEPH DAVIES & Co.,

Lumber, Coal, & Commission Merchants,

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WHOLESALE DEALER IN

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BY IMPROVED MACHINERY.

All kinds of Corks in stock and Cut to Order. Corks & Life Preservers a Specialty. Corkwood, Tinfoil, Capsules, Wire, &c.

71 Jarvis Street, TORONTO. 6l16

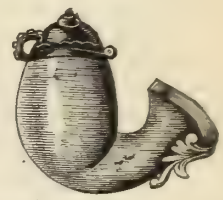
S. S. MUTTON & Co.,

Wholesale Lumber Dealers

TORONTO.

We have for Sale a large quantity of PINE, OAK, WHITEWOOD, ASH, CHESTNUT, CHERRY, BUTTERNUT, BASSWOOD, &c.

P.S.—Also on hand 120 M dry Oak 2 to 4 inches thick, will be sold cheap to close it out. 1yl16



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The ABEL EDWARDS CENTENNIAL TURBINE WATER WHEEL.

RODEBAUGH'S SAW FRAME, MILL DOGS and SAW GUIDES.

WATER WORKS, THE LATEST AND MOST IMPROVED, MADE TO ORDER.

LIGHT and HEAVY BRASS and IRON CASTINGS.

Plans and Specifications on application.

The Walkerville Foundry,

AND

MACHINE WORKS.

Walkerville, Ont., June 1881. 12l16

A BIG JAM.

30,000,000 FEET OF LOGS IN ONE JAM.

On the morning of May 22nd, there was considerable anxiety all along the Miramichi in reference to the probable effect of the freshet in the South West boom, which is the great receptacle of the lumber obtained on that branch of the river. There were about twenty million feet of logs in the boom in the morning, and the main river and Renous drives were coming along at such a rate as to make it plainly apparent that it would be necessary to jam the river. The lesee of the boom, Jas. Robinson, Esq., decided that the point of danger was reached, and he made the jam at Bryanton's shore. This was early in the forenoon. By half-past three ten millions feet of logs had run into the jam, when the accumulated mass bore so heavily on the boom and jam piers that the tops were swept off half a dozen of the latter, the boom was broken and the ten millions feet composing the jam left the twenty millions below it—in the part of the boom which still held good—and went on the run down stream at the rate of about four miles an hour. Persons who have lived on the river for a long time and have seen other breaks in the South-west boom say they never saw such a run of logs at one time before, and it seemed to them that a great loss was inevitable.

It happened that Messrs. R. A. & S. Stewart had completed the telephonic communication only the day before between their office in Newcastle and that of Mr. Andrew Morrison, surveyor, at Parker's just opposite the boom, so the condition of things as they transpired was made known in Newcastle. Messages were also sent through Mr. Miller's telephone at Derby *via* Newcastle to Chatham, and little time was last in making preparations to save the property now adrift.

The steamer *Andover*, with her owner, R. R. Call, Esq., on board, had started on Saturday forenoon on her regular trip up-river, but was prevented by the jam from proceeding to Indian Town. As it was known she was to be at the Hemlock Extract Factory wharf for some time, word was sent down, as soon as the danger of a break was seen, requesting that she be held ready for the emergency, and this was soon followed by the announcement of the break, carried by a man on horseback, and a call for both the *Andover* and *Derby*. Steam was got up on the latter, while the *Andover* proceeded up stream, meeting with and passing the logs, which her stern wheel enabled her to do, until the boom just below the rafting ground was reached. This had been unshackled by men of Mr. Robinson's rafting crew, who were working it down stream and the *Andover*, taking in tow, proceeded down the river. Much difficulty was experienced in running with the necessary speed down stream, for the logs were very thick and water was to be seen only here and there. The raftsmen who had got on board the steamer, as well as the hands belonging to the latter, were kept busy with their pike-poles shoving logs clear of the bow, and all who witnessed the race between the logs and the *Andover* for the South-West Railway bridge were gratified to see that the boat must win. They were properly anxious over the matter for unless the boom could be stretched across the river against the ice-breakers of the bridge the ten millions which had broken the boom as well as an additional twenty millions or more following would nearly all be lost. Fortunately the *Andover* got clear of the running logs and reached the railway bridge two miles in advance of them, so that before they came down the latter steamer, assisted by the *Derby*, stretched the boom across the spans, although it fell short of reaching each shore. It was made fast and the shore spans were also secured as well as the facilities at hand admitted of, when the mass of logs was borne down upon it by the current. This was a time of the greatest anxiety, for the shore ends of the boom at each side of the river let the logs slip through. The daring boom men, under Mr. George Parker, Mr. Robinson's foreman, were equal to the emergency, and a dozen of them ventured out on the moving mass of logs under the south span with the heavy lines, which they made fast to the logs in the second span of the bridge and around the base of the pier. The representative of the *Advance* who was present on the steamer *St. George*, which had run up from Chatham, describes the work done at this juncture as most hazardous as well as difficult. Our readers can imagine for themselves a mass of logs moving through a two-hundred feet span of a bridge as through a sluice, with the current running as fast as a man might walk, and a few men carrying a heavy six or eight inch line across from shore to pier, stepping and springing from log to log and then running back and down stream to clear the line as its bight was caught by the running lumber. Although some gallant fellow missed his footing or was obliged to let himself go down in his desire to clear the line, he would "up and at it again," while the on-looker wondered at the practised self-possession of these splendid men and the tenacity and pluck with which they hung to a task which few men are ever called on to perform—a task involving great physical endurance, special knowledge and experience and a strength of purpose which is a noble characteristic wherever found.

Success rewarded the efforts of the workers at the two shore spans, and just as the run was stopped, after letting, perhaps, about a million feet through, there was snapping and crashing at the third pier from the north shore of the river, caused by the boom breaking because of the mass of logs forcing it across the angular end of the granite ice-breaker there. As the broken boom ends and some logs drifted down from the direction of the pier where the break occurred, it was feared that the drift would escape, but the mass of logs above simply crushed in together, and not more than a hundred pieces escaped before the jam became self-sustaining. Similar breaks occurred afterwards, but the danger was practically over when the shore spans were made safe.

Of course much remained to be done after this in the way of prevention. Additional lines and hawsers had to be secured, and they were supplied by our merchants and others who had them, the *St. George* having taken up two and the *Andover* being run down to Newcastle and Chatham during the evening for more. The men worked all night and part of Sunday, when the jam was pronounced safe and the freshet had begun to fall off.

The logs which ran through under the bridge on Saturday—perhaps a million feet in all—were caught by temporary and other booms and by men in boats at points along the south side of the river, only about one hundred pieces going out to sea. The schooner *Claymore*, Captain Marquis, arrived on Sunday, and we base this estimate of total loss on report which he brought in. It will therefore be seen that the loss is trifling. Indeed the loss of logs on the Miramichi this spring has been unusually small, as compared with other seasons, and had it not been for the break of Saturday not a log would have been lost, a most unusual circumstance, due to the ice having melted instead of running out.

A meeting of the Directors of the Boom Company was held. All the parties interested in the logs were allowed to be present and take a part in the proceedings. After an exchange of opinions and suggestions, it was agreed that Mr. Robinson, lessee of the boom, proceed and raft out the jam at the bridge, with all possible dispatch. To facilitate his work the logs are to be rafted—in what is known as mixed rafts—for a fortnight, and deliveries are to be made to owners, in proportion to the logs they may have in the drift, a strict account of all to be kept, and any person receiving more logs of his neighbor than the latter receives belonging to him, is to return the same quantity to him or payment at the rate of $7 per thousand therefor, and two-thirds of that rate for undersized logs within a fortnight after the drift account is closed.

On Sunday, Monday, and the Queen's Birthday, the South-west Boom was visited by hundreds of people who had never witnessed such a jam of logs before in their lives and may never again see a similar one—there being now 30,000,000 feet in the jam.—*Miramichi Advance.*

Hagyard's Pectoral Balsam is a purely vegetable healing balsam. It cures by loosening the phlegm and corrupt matter from the Lungs and expelling it from the system. Croup, Asthma, Bronchitis, Hoarseness and all pectoral diseases yield to it promptly. It costs 25 cents a bottle.

STRIKES.

A recent number of the *Northwestern Lumberman* contained an article on the above subject from which we take the following sensible remarks :—

Notably in politics and religion there are men who ignore the fact that other men were born with brains, and seem to think that the Almighty has placed a special brand of superiority upon them, thereby giving them the supreme right to rule others, and to think for others. A marked specimen of this egotism has been on exhibition in the United States senate, and it does not take a long hunt to find it in the pulpit. This same disposition is manifest in nearly every business and profession. Men who imagine they were born to lead and not to work, are constantly engaged in the formation and direction of various unions, taking advantage of every ripple of dissatisfaction, sowing the seeds of discontent where before there was contentment, and all the while keeping their eyes straight on offices and high salaries. A while ago a gentleman in an eastern town made a wager with a friend that he could get a certain number of names to a petition praying that a covering be built over the sun dial on the public square. Such a petition, it would seem, would be the last one to be signed, for the dial, if not a necessity, was at least a curiosity, and one of the old landmarks of the park. No one in a sober moment, uninfluenced, would think of covering the dial, and under ordinary circumstances would call the covering of it an unheard-of and dastardly piece of business ; but specious arguments changed these latent views, and the gentleman returned with the required number of signatures and claimed the wager. The leaders of the unions understand this trait in human nature, and make capital of it. They are aware of the susceptibility of the average mind, and set themselves at work to make the most of it. They care little whether their followers recline at night on comfortable beds or in the alley, so long as their dues are regularly paid. They call themselves the workingman's friends, but they are the syphons that draw from the workingman's pockets his money. This is not always so, maybe, but it often is. The necessity of unions is a question which has been often discussed *pro* and *con*, and one that cannot be settled with a few strokes of the pen. But common sense dictates that when a man of the character described above is at the head of a union, the members of it should look upon him as a barnacle that should be removed from the bottom of the ship in which they sail. And it is a pertinent question for every workingman to ask himself, Is is right than any man, or men, should dictate to me where I am to work, and what wages I am to receive? Answered in the affirmative, it follows that a man does not best know his own needs, and is not at liberty to follow out his desires. The folly of submitting to such dictation was forcibly illustrated by the action of the striking switchmen in this city a few days ago. They asked for more money to buy food and pay rent with, then formed into line and hired a band of several pieces to escort them through the streets. The request and the act were paradoxical in nature. But they said they did it in order that the citizens of Chicago might see that they were an orderly lot of men. Of course, at that time, they were orderly. They had advertised that they would be orderly, and no one expected them to be otherwise. But a while after that, when they were hurling brickbats and coupling pins at the heads of men who were employed in their places, and who were innocently striving to earn an honest living, it might truthfully be said that they were not orderly. Had not these disgraceful proceedings been checked by the police, ere this their high-handed outrages would have been such that all the bands in the city would be unable to toot them into good repute.

Do strikes pay? It is a matter of history that generally they do not—that is, they do not pay the strikers, and could the loss to manufacturers and corporations be known it would be an argument against them that could not be appealed from. To ascertain how much the strikes this spring have cost this city in dollars and cents would involve intribate and profound calculations. But, of course, this is of no moment to the men who strike, for they go coolly and deliberately at work to occasion these losses. When they are losers themselves it does not serve to teach them better. Last summer the job members of the typographical union struck for an advance of $3 per week. The result was that many of them were idle in the streets during the remainder of the summer. In such cases there is, in addition, a prospective loss, that is liable in the future to assume tangible forms. There is such a thing as competence and stability receiving a suitable reward. There is a feeling that is possessed by business men that they do not care to keep employed, longer than really necessary, men who are unreliable and who, at any moment, do not hesitate to peril the business that their labor should sustain and make more valuable. There is an indisposition on the part of business men to avoid giving employment to men of such character. Money is not all the capital a man can have. The man who is competent, industrious and reliable is wanted for all he is worth by somebody. If he stands ready to cripple the business that not only feeds his employer but himself, he should not wonder if he is not wanted.

It is singular that there are so many men who think that in the matter of employment there is but one party to the bargain. They forget, or seem to forget, that one man is not obliged to employ another any more than one man is obliged to work for another. Labor is a marketable article, and capital cannot buy it unless it is willing to be bought. Those workmen are ill-advised who rant about the desire of capital to crush and belittle them ; if they were not so advised they would appreciate that capital and labor are dependent, one upon the other. If a man is thoroughly imbued with the idea that capital is his enemy, let him keep away from it. Let him paddle his own canoe. In this free country no man is obliged to work for a tyrant ; and the country is large enough for the exercise of any skill or talent that a man may possess.

There is no law, legal or moral, that prevents a man from asking for higher wages, or quitting work, so long as there is no contract verbal or written that binds him to continue longer. Thus far it is the privilege of employees to go ; farther than that it is the right of employers to say they shall not go. A striker has no more right to attempt to undermine the business of his former employer, because the latter refuses to pay a higher price for the labor he buys, than the employer has to undermine the house in which the laborer lives, because the latter will not work for a certain sum. A striker has no right to bulldoze, or what is worse, as is often done, physically injure a man who is willing to take a vacated place at the wages formerly paid. There is a law written in the statute books of several states, making riotous conduct a penal offence, and there is a growing desire on the part of order-loving people at large that the construction of the law should include the unruly element considered in this article, and a growing disposition on the part of many magistrates of the law to so construe it.

Two Thousand Dollars.

The easiest, cheapest and best way to secure the above amount is to apply for membership in the Mutual Benefit Association of Rochester, N.Y. Pay Dr. S. B. Pollard, 56 Bay Street, one dollar for four medical examinations, he will send your application to the head office, if you are accepted as a member they will issue a certificate of membership, which, on payment of eight dollars, entitles you to full benefits as a member, should you die to-morrow, next day, next week, next month, or any time within three months, this Association will pay to your heirs, or assigns, the sum of two thousand dollars. At the expiration of the three months all you have to do is to pay your pro rata amount, which is from 20 to 75 cents on the death of some other member, who has done nothing worse than to die during the three months just past. By paying your assessments on deaths, you keep your certificate alive, and at the commencement of the second year you are assessed two dollars per thousand to keep up office expenses, etc., for the next year. No easier, surer or better schemes to carry two thousand dollars has ever been devised than the Mutual Benefit Associates, of Rochester, N.Y.

5-1-18

THE RIVERS AND STREAMS BILL.

REPORT OF THE MINISTER OF JUSTICE—REASONS FOR THE DISALLOWANCE.

The following is a copy of the report of the Minister of Justice on the River and Streams Bill:—

DEPARTMENT OF JUSTICE,
OTTAWA, May 7th, 1881.

I have the honor to report with respect to an Act passed by the Legislature of the Province of Ontario at its last session, intituled:—"An Act for protecting the public interests in rivers, streams and Creeks."

Application for the disallowance of this Act has been made by Mr. Peter McLaren, of the Town of Perth, lumber manufacturer, on the ground that the Act in question deprives him of vested private rights without compensation, and practically reverses the decision of the Court of Chancery in a case brought by him against one Caldwell, whereby Mr. McLaren's exclusive right to the use of improvements erected by him or those through whom he claims on certain streams in the Province of Ontario was established by a decree of the court.

The Act by its first section declared that all persons have, and always have had, during the spring, summer, and autumn freshets the right to float and transmit saw logs, etc., down all rivers, creeks and streams, in respect of which the Legislature of Ontario has authority to give this power, and in case it may be necessary to remove any obstruction from such river, creek, or stream, or construct any apron, dam, etc., necessary to facilitate the floating of saw logs, etc., down the same, it shall be lawful for the person requiring to float down the saw logs, etc., to remove such obstruction, and to construct such apron, dam, etc.

The second section declares that in case any person shall construct in or upon such river, creek or stream any such apron, dam, etc., or shall otherwise improve the floatability of such river, creek or stream, such persons shall not have the exclusive right to the use or control thereof; but all persons shall have a right to use them, subject to the payment to the person who has made such constructions and improvements of reasonable tolls.

The third section extends the operations of sections one and two to all rivers, creeks and streams mentioned in the first section, and to all constructions and improvements made therein, whether the bed of the river, etc,, or the land through which it runs, belongs to the Crown or not.

The fourth section empowers the Lieutenant-Governor-in-Council to fix the amounts which any person entitled to tolls under the Act shall be at liberty to charge on saw-logs, etc.

The fifth section extends the previous provisions of the Act to all such constructions and improvements as may hitherto have been made, as well as to those hereafter constructed.

The sixth section gives to all persons driving saw logs, &c., down the streams, the right to go along the banks.

The seventh, and last, section declares that if any suit is now pending, the result of which will be changed by the passage of this Act, the court may order the costs of the suit to be paid by the party who would have been required to pay the costs if the Act had not been passed.

It is tolerably clear that this section refers specially to the suit of McLaren against Cald well above referred to. It appears that Mr. McLaren is the owner of certain streams and improvements on streams which he makes use of for the purpose of floating down saw logs from the timber limits from which he takes the same for the purposes of his business as a lumber manufacturer.

Mr. Caldwell is also a lumber manufacturer owning timber limits in the neighbourhood of those owned by Mr. McLaren.

He attempted to float his logs down Mr. McLaren's streams and through his improvements. To prevent his doing so, the suit in chancery above referred to was instituted, and a decree was made declaring Mr. McLaren exclusively entitled to the use of the streams and improvements and restraining Mr. Caldwell from floating his logs down the same.

That case has been appealed to the Court of Appeal. The effect of the Act now under consideration must necessarily be to reverse the decision of this suit.

Had this Act, instead of giving to any person desiring to make use of the streams the right to use the same upon payment of certain tolls absolutely expropriated the whole ownership of the streams for the public use, and provided a means of compensating the owners for the property so taken from them, it would be less objectionable in its features.

The effect of the Act as it now stands seems to be to take away the use of his property from one person and give it to another, forcing the owner practically to become a toll-keeper against his will, if he wishes to get any compensation for being thus deprived of his rights.

I think the power of the Local Legislature to take away the rights of one man and vest them in another, as is done by this Act, is exceedingly doubtful, but assuming that such right does in strictness exist, I think it devolves upon this Government to see that such powers are not exercised in flagrant violation of private rights and national justice, especially when, as in this case, in addition to interfering with the private rights in the way alluded to, the Act overrides a decision of a court of competent jurisdiction by declaring retrospectively that the law always was and is different from that laid down by the court.

In reporting upon a reserved bill of the Prince Edward Island Legislature in 1876, the then acting Minister of Justice reported to Council, and His Excellency was advised to withhold his assent from the bill, one of the grounds being that the bill was retrospective in its effect; that it dealt with the rights of the parties then in litigation, and that there was no provision saving the rights of private parties.

On the whole I think the Act should be disallowed. I recommend, therefore, that the Act passed by the Legislature of Ontario at its last session, intituled: "An Act for Protecting the Public Interests in Rivers, Streams, and Creeks," be disallowed.

(Signed)
JAMES MCDONALD,
Minister of Justice,
per J. A. M.

WHAT BURNS THE MILLS.

With the opening of the season, the saw-mill proprietor enters not only upon a period of active labor in the production of lumber, but upon a season fraught with the gravest apprehensions. He may not fear that through a low stage of water his supply of logs will be stranded upon the upper waters, or rather bars, of the river or creek upon which he has launched them; he may not fear that river pirates will snatch them from the drive, and put them upon the market before they can float within reach of his own ability to manufacture them; he may, in fact, be blessed with a boom full at the mill, and enough in a handy store boom at no great distance away to bid adieu to all apprehensions of a season's shortage; but the time of his peril as well as his profit is upon him, and from now to the close of the season he may well assert that "uneasy lies the head" of the man who owns a saw mill. If he could be about the mill through the night as well as through the day, and were he endowed with powers that did not need to seek recuperation in sleep, he could rest somewhat easy in his mind as he contemplated the risk attaching to his property, in the contemplation of the fact that his own eternal vigilance would prove the price of his safety from the danger of fire.

With the beginning of the present sawing season, come thicker and faster the reports of mills destroyed, and hopes of prosperity plasted. In fact, the number of saw mills thus far this season reported as gone up in smoke is remarkably large, and the fact calls for a more careful attention on the part of every saw mill owner, lest he too be called upon to part in an hour with the fruits of a lifetime, or at least of many years of labor.

It is not possible to point out all the causes of fire that lurk unseen around the saw mills of the country, only awaiting a favorable combination of circustances to make known their dangerous nature, but in calling attention to a few of them it may not be impossible that others will suggest themselves to the minds of our readers, leading to such examination of their premises as secure the adoption of safeguards which shall prove the ounce of prevention better than a pound or more of regret. Mill arches, which have stood all winter, are quite likely to settle somewhat, soon after a season's work begins, and the jar and rattle of the machinery develops the shell of weakness which has held them. Cracks in the wall to which no particular attention is paid, have proved a most serious source of danger in permitting sparks to escape upon the light dry dust which is almost certain to have accumulated upon the beams and timbers in the neighborhood of the engine room. These should not be permitted to "run a day or two longer" before having them fixed. Procrastination is not only the thief of time, but has destroyed many a good saw mill, and the only safe motto about a mill is found in the trite saying, "Never put off until to-morrow what it is needful and wise to do to-day."

Careless engineers and faithless watchmen are about the most dangerous things to be found about a mill. The former allows the sawdust to accumulate about the furnace doors or hearth, and if the truth were to be known about many a saw mill fire, it would be found to have its inception in this scattered sawdust, which ignited while the engineer had "just stepped out of the fire room for a minute." His call outside proves a most disastrous minute for the proprietor, though the resultant destruction could have been averted if the hearth had been well swept before he stepped out. Probably two-thirds of the fires which destroy saw mills in the day-time arise from this cause. It is no uncommon thing to see the engineer of a saw mill bank up his hearth doors with sawdust, when he shuts down at noon and goes to his dinner. Such an engineer is a most excellent subject for discharge from a man's employ, and if the mill does not take fire the first time he does it, the old adage about taking the pitcher to the well once too often is pretty sure to be verified before the season is over.

Night fires are more usually the result of a too implicit confidence in the watchman, than many suppose. We would not assert that all watchmen are unfaithful, but experience has proved the value of a proprietor's call at the mill at unseasonable hours of the night. If you find a wide plank or two laying across the top of your boilers, or suspiciously near to the arch, you may be pretty sure that a quiet visit to that locality in the small hours of the night, will find them occupied by a lodger whom you have paid to walk around and see that no marauders are threatening your property, and no incipient blaze is endangering its safety. It is a good thing to have an energetic man in your employ, but when you find your watchman always ready to fill an extra place during the day, and apparently able to do without sleep for an indefinite length of time, you can be almost positively sure that what sleep he dispenses with in the day-time is taken at your risk during the night. It is well to be suspicious of the faithfulness of the man who can watch all night and every night, and grow fat on it, while working half or three-quarters of the time during the day. It is at least a good plan to vist him occasionally when he least expects you, for by such visits you can often reduce the amount of your apprehension, if not the actual premium on your insurance.

The spark-catcher on your smoke stack may be all safe enough, for practical purposes; but when you find a little patch of fire here and there through the mill yark, on a hot day, it will pay handsomely to call in the boiler maker, or set your engineer at work to make the meshes smaller, or to put up a new wire screen in place of the damaged one, which will warm you some day with a hotter blaze than is healthy or profitable. Your fire pump may be a first-class one; but when you go into a mill and see a row of empty water buckets in the rack on the saw floor, you can rest assured that if a fire ever starts on those premises, the fire pump will be of very little service. Empty buckets are a pretty sure sign of lazy engineers and mill foremen, and a disabled pump. Uufortunately, when a fire starts on saw mill premises, it is usually in too much of a hurry to get through the contract it has taken in hand to allow a machinist to be sent for to put the pumps in order, or to repair the hose which has been hanging on a peg in the wall until it is ready to drop to pieces from decay. The truism that "a stitch in time saves nine," has often been correctly rendered, "a full bucket of water saves the mill." With the record of saw mill fires daily increasing, it well becomes all who are interested in this class of property, to give the subject of its safety from fire a little of the care that is taken to obtain a full stock of logs, or an extraordinary cut by the saws.—*Northwestern Lumberman.*

COMBINATION LUMBERING.

Regarding the recent combination of lumbering interests on the Chippewa river, Wis., of which some details were given some time since, the Minneapolis *Lumberman* says: The purchase of the immense property of the Chippewa Lumber & Boom Co., by the lumbermen of EauClaire and the Mississippi Logging Company is one of the largest transactions of the kind which ever occurred in this country. The total value of the property is $1,496,000. The realty costing $1,275,000 and the rest being for logs cut during the winter. A sort of syndicate has been formed between the Mississippi Logging Co. of Eau Claire by which it is intended to bring about entire harmony in all future lumbering operations on the Chippewa. The amount of property taken by the new combination including most of the property of the Chippewa Falls Co., and also certain improvement dams, etc., heretofore made by the Mississippi Logging Co., on the river above Chippewa Falls. The total property which goes into the hands of the pool is $1,232,000, which is divided up so that 492 shares go to Eau Claire and 738 goes to the Mississippi Logging Co. The shares at Eau Claire are divided up among the companies there. The significance of the great transactions to the trade lays in the fact that it means more economical production of logs on the Chippewa river by united and harmonious action. Experience has demonstrated lumbering operations on our rivers, (especially driving,) can be much more successfully carried on under a single management, than by scores of individual operators, each bent on getting the start or advantage of his neighbors. The trouble in the latter case being that every man knows that his plan of operation is the best and the rest cannot see it.

The lumbermen of the Chippewa river have been acquiring an education in these matters, and probably have spent as much as the present investment in finding out that they could do better in a friendly pool of common interests than by struggling for the ascendency. Hereafter there will be no more wars, or rumors of wars, on the raging Chippewa, and everybody should rejoice who lives this side of Chicago.

The Eau Claire *News* recently published the following on the same subject: It is rumored that a number of Fau Claire lumbermen have purchased two-fifths of the stock of the Chippewa Lumber & Boom Company, thus putting the control of lumbering operations on the Chippewa in the hands of one big corporation. The Chippewa Lumber & Boom Company, it will be remembered, is the owner of all the pine lands, town property, saw mills, dams, booms, etc., formerly owned by Peck & Barnard, successors to the Union Lumbering Co., valued at $1,275,000. The capital stock of this company consists of 1,230 shares of $1,000 each. Of this amount twelve firms on the Mississippi river own $738,000, and six Eau Claire concerns $492,000.

Although the Boom Company is not yet fully organized, it is understood that the stock taken here is as follows:—

Empire Lumber Co., $125,000; Eau Claire Lumber Co., $105,000; Valley Lumber Co., $73,000; North Western Lumber Co., $73,000; Daniel Shaw Lumber Co., $62,000; Badger State Lumber Co., $50,000.

If these rumors are true, and they seem to be well founded, it looks as though it was the intention of the lumbermen to act in harmony in the future and conduct their operations in a manner to subserve their combined interests. It is easy to see that such a powerful combination will be able to control in a great measure, all the lumbering operations on the river.

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Peterborough, Ont., June 13th, 1881.

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The Canada Lumberman

DEVOTED TO THE LUMBER AND TIMBER INTERESTS OF THE DOMINION.

PUBLISHED SEMI-MONTHLY BY
TOKER & Co. PETERBOROUGH.

Terms of Subscription :

One copy, one year, in advance	$2 00
One copy, six months, in advance	1 00

Advertising Rates :

Per line, for one year	$0 90
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Per line, for three months	30
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Communications intended for insertion in the CANADA LUMBERMAN, must be accompanied by the name of the writer, not necessarily for publication, but as a guarantee of good faith. Communications to insure insertion (if accepted) in the following number, should be in the hands of the publishers a week before the date of the next issue.

PETERBOROUGH, Ont. JUNE 15, 1881.

THE HARDWOOD TRADE.

While pine is undoubtedly the most valuable as well as chief product of our forests, it cannot be too frequently impressed upon our people that a vast field for the employment of labour and capital lies before them in the other varieties of timber which our forests produce.

With advanced prices for pine the tendency will be more and more to substitute the former for the latter. Already in the neighbouring States hardwoods, such as maple and beech, are taking the place of pine for the purpose of flooring, and various finishings in houses, while every ship, every wagon, every agricultural implement, every piano, every piece of furniture, every railway car, every nicely finished room calls for more or less hardwood, and inasmuch as this same call comes from a rapidly growing continent as well as from Europe, it is evident that in our hardwoods we have a source of national wealth and individual employment and prosperity that should not be despised. We observe that the hardwood trade of Chicago alone for 1880 is estimated at 250,000,000 feet, or about one-sixth of its pine trade, and that nearly 7,000,000 feet of hardwoods were cut in the Saginaw Valley alone in 1880, where its first manufacture dates only a few years back. In Michigan only a few years ago maple was valueless, and now every tree is husbanded as representing so much money. Birch too, which was a drug, is now anxiously sought after by furniture men, and so on through the round until you reach the despised poplar, which has found a commercial value for the manufacture of printing and wrapping papers.

While the field is a good one and prices of hardwoods like pine is booming, it will, however, be wise in those who think of embarking in the hardwood trade to proceed cautiously. Very much depends upon how it is manufactured and handled, while it requires time to season, and is of comparatively little value until properly seasoned.

HEMLOCK TREES AND BARK EXTRACT.

Our neighbors in New Brunswick are considerably exercised over the hemlock bark question. It appears that recently three representative men visited Fredericton, in the milling and lumbering interests of Northern Kent, to protest against the Local Government's policy of selling outright, to parties interested in manufacturing hemlock bark extract, portions of the timber lands licensed to them for general lumbering purposes. The Crown Lands Department has advertised for sale 1,000 acres of land on the Richibucto river under license to Mr. E. Walker, and from which he draws supplies from his mill on Bass river, and surveys have been made of other blocks on the Coal Branch, the Kouchibouguac and the Kouchibouguacis, affecting the other mill owners. There is a considerable number of hemlock trees on the streams named, and the Government claim that under the terms of the licenses granted to the mill-owners and lumberers these lands can be sold at any time. The St. John *Sun* says : "It may be justifiable to withdraw such lands from the lumbermen when they are actually required for actual settlement purposes, but it seems scarcely just or reasonable to refuse to sell these lands, so necessary to the supply of the saw mills of the country, to one class of lumbermen, and to sell them absolutely (not simply license them) to another class of lumbermen. In the one case the trees are cut down, hauled out, sawn into lumber and form a staple export of the country. In the other case, the trees are cut down and stripped of their bark, which alone is removed ; the trees themselves are left to rot in the woods ; the prosecution of other lumbering is greatly obstructed ; and the risk of forest fires is greatly increased." The *Sun* goes on to say : "We hope the Provincial Government will consider the whole question very fully before deciding to sacrifice an old and important industry for the sake of one which, with some good features, has a number of very bad ones. We regret to learn that the mill-owners' protests have not been favorably regarded by the Local Government, but there is still time for the Government to reconsider their original decision in the matter. We incline to the opinion that the country will say there is a practical grievance here which the Government cannot pass over without serious injury to the public interests."

Mr. Chas. A. D. Miller gives his views in the St. John *Telegraph* on the other side of the question. He says :—

"It is argued that the selling of a certain quantity of land in Kent County to a firm interested in the Bark Extract business on the sole condition that they erect one of their factories in the district will have the effect of seriously injuring saw mill owners in that part of the country, and that it is a great injustice to these gentlmmen. Now this is not all borne out by the facts of the case, as all unpredjudiced persons will readily admit, for the extract manufacturers do not want the spruce or pine (whatever small quantities of these may remain on these lands, they having been cut and culled over and over again for the last 30 years and more) but on the contrary are perfectly willing that the lumbermen should make use of what remains on the lands they may take up as heretofore, and in fact offer to the mill owners this lumber on condition that they give them in return the hemlock bark on what lands they (the lumbermen) may hold, which surely is fair enough. In fact the establishment of a bark extract factory in that part of the country will increase the value of mill property and provide them with work for many years to come, for the effect of such a factory will be to furnish them with an abundant supply of hemlock logs which otherwise would be too expensive to lay down at the mill, unless the bark were also utilized, and at the same time they will have their supply of spruce logs, etc., as intact as before.

"It must also be borne in mind that the spruce and pine in this district have now become so scarce, and what is left of them, so small, that it is very unprofitable work, and does not give their mills anything like full employment. Hemlock logs, on the contrary, at the prices at which they will, by the erection of the bark factories, be enabled to obtain them, delivered at their mills, will offer much more remunerative and constant employment.

"Now as regards the argument that this bark should be reserved for the use of tanneries in the future. What guarantee have we got that large tanneries will ever be established in this section? In this age of progress and discoveries can we be certain that hemlock as a tanning agent will not at any moment be superseded by some cheaper and more perfect tanning agent? Do not India and the Levant and other tropical countries produce tanning materials which grow up and are gathered every year in the form of nuts and a species of plum, etc., which are now being shipped to England and Europe generally in immense quantities, and which have almost entirely taken the place of oak bark for tanning purposes? The production of these articles can be forced at will and is enormously increasing, and whereas as hemlock bark only contains from 4 to 7 per cent. of tanning, these articles contain from 20 to 40 per cent. The effect already of the introducton of these materials, though hemlock and oak bark may be becoming scarcer, has been that tanning agents in the great markets of the world are cheaper to-day than they were 10 or 20 years ago, and this, too, notwithstanding that the tanning trade in the same time has enormously increased. There is an old saying that 'Hay should be made while the sun shines,' and surely the present generation should not be allowed to starve that a future one may have a merely prospective advantage.

"England does not prohibit the use of coal, though scientists unanimously declare that it must, ere long, be exhausted. The fact of the matter is that there will always be enough bark in New Brunswick, and to spare, to tan all domestic hides ; and as much money is expended per cord of bark used in the manufacture of merchantable bark extract, as in the case of a large tannery, which invariably has to look to a foreign country for its supply of hides, which is by far the largest item of expenditure in such an industry. In this respect it contrasts unfavorably with the hemlock extract business, in which the entire expenditure is made in the country."

HOW TO SPLICE BELTS.

Mr. W. McGrath, one of the employes of the Dickson Estate Mills, has sent us the following anent the item which appeared in a late issue of this journal with regard to the running of the splices of a belt :—

A belt should be put on so that the splices will run with the pulleys, not against them. Both pulleys, the driving and driven run the same way, consequently the splices act the same on both. In instances where a pulley is on both sides of a belt, as is the case when a tightner is used, put the belt on so that the splices will run with the smaller pulley. The grain side of the leather should be put next the pulley, as it is more close and will not stretch as much as the flesh side. It is also smoother and will not be so apt to slip under the strain of starting up.

McCLAREN vs. CALDWELL.

Since our last issue this case has occupied the attention of the Court of Appeal for several days. The lengthy arguments of the counsel having been concluded, judgment was reserved. Several minor moves have also been made on the legal chess-board with regard to the same, without, so far as we can see, any material benefit to either party.

PETERBOROUGH.

PETERBOROUGH, June 13.—The river here is full of logs. Some forty river drivers are camped at the Little Lake, and there are now between this point and Stoney Lake fully 500,000 logs bound for the mills.

WE are informed on excellent authority that the Dominion Bank recently sold their mill cut of last season (with mill culls out) for $12 per 1,000 f.o.b. at Longford mills. This lot could not be considered above an average one.

A SMALL MILLER'S COMPLAINT.

To the Editor of The Canada Lumberman :

FALKENBOURG, June 6th, 1881.

DEAR SIR,—I see in the current month you ask for correspondence under the head of "Class Journalism," from persons interested in the lumber trade. This brings to mind the case of small saw mill men, of whom, being one myself, I can speak "feelingly." Now, such men find it quite a feat, and a hard one too, to furnish and stock up a small mill with a few thousand logs, cut them into lumber, and get it to market without the loan, in most cases, of a cent from a bank, they are consequently forced to hurry their lumber to market and sell for anything they can get in order to meet running expenses, and, of course, they nearly always sell at great disadvantages. For instance take this case, such a man "ships" 2 or 3 carloads to Toronto say, when he gets there he has little cash, and can't wait, he must sell, the planing mill men know this, and they've got him ; they offer what they like, and a bargain is made, and the lumber is sold for sometimes a third less than its real value ; then in measuring, the buyer has the seller again, if a board is damaged in transit, it is culled, and a wide margin is taken for "checks," sun-dried boards, spoil lying on cars, docks, and waiting shipment, this margin in a few carloads is often thousands of feet ; these culls are rated as of no value, although firewood is $5 or $6 a cord in Toronto. All this reduces the price of the lumber to a low figure, that just allows the millman to live by a hard struggle, and he often breaks down after a short fight, and is bankrupt. Now, if a combination of small mill men was formed, a depot at some point formed under proper management at any good point for selling, where the lumber could be received and taken proper care of, and sold at a fair profit, how much better that would be for such men as I describe, and it would injure nobody, but would be a fair way of doing business, and the standing, etc., of the persons availing themselves of these arrangements could be learnt, and loans could be got from banks to enable a better winter's work to be done in stocking up and cutting, etc., better and more lumber could be made at a benefit to all round. This idea, no doubt, has occurred to many, but I have not seen it in print. If it interests any of your readers, well and good ; if not, no harm is done ; and as your paper is especially devoted to the trade, to which it is doubtless doing good service, I suppose one may consider the above named as a fair subject for thinking over by anyone concerned.

Yours truly,
W. MOORE.

[We shall be glad to hear from others on this or any other subject connected with the trade. One of the advantages to be derived from the publication of such a paper as THE CANADA LUMBERMAN, is that it will afford a medium for the expression of opinions, and thus secure the removal of grievances.—ED. LUMBERMAN.]

BRACEBRIDGE.

THE late rains have been the means of bringing out nearly all the logs that were expected to be "hung up" for the present season. The Little East drive is still moving, but it is slow work as the water is very low. The tail of the Muskoka Boom Company's drive is past Baysville, on the South Branch, and they are running into Mary Lake. On the North Branch the head of the drive is within three miles of the Georgian Bay, and the Company expects to begin delivering these the last of this month, which will be about a month earlier than usual. The water generally is very low and falling

BOBCAYGEON.

A scow load of poplar has passed through the Locks here on its way to the Napanee Paper Mills. At Lindsay it will be transferred to the cars and taken to Napanee. As poplar makes first-rate paper, the probabilities are that this will prove the pioneer shipment of many to follow from the same district.

THE steamboats are busy with the drives.

ULLYOT & SADDLER'S drive of 40,000 pieces, from the township of Anson, are now passing the slides *en route* for Harwood. They are a fine lot.

NOTES BY THE WAY.

LINDSAY.

Building operations, so far, have not been brisk in Lindsay this season. A few buildings are under contract, and the block of wooden buildings recently burned, covering an acre of ground, will have to be rebuilt, which will create some extra work.

One saw mill, known as "The Yankee Mill," (Bond, Downer & Co.) has been shut down for the past two seasons. The other two saw mills in Lindsay are running full time. Messrs. Needler & Sadler's mill, driven by water power, is running from six o'clock a.m. to eight p.m. The cut this season will amount to 100,000 feet custom work, and 700,000 feet from logs got out on their own account last winter. They had a new "burner" built last spring to consume sawdust and refuse. It is constructed after the pattern of a steam boiler furnace with ordinary smoke-stack, and answers the purpose well.

Mr. Thurston's mill is working full time in the various branches of sawing, shingle-making, etc., carried on by this enterprising gentleman. The stock of logs got out by him last winter has been, proportionately, considerably more expensive than that of former years, which must reduce the ultimate profits. The same rule applies more or less to stocks, generally, cut last winter.

Shingle manufacture is an extensive industry in Lindsay. Mr. Fee is engaged in completing his stock of cedar shingles before commencing the pine stock, as when the weather becomes dry the manufacture of cedar shingles is disagreeable on account of the impalpable dust which comes from the seasoned blocks; whilst, on the other hand, before the wood gets too dry the work is pleasant, and the aroma of the cedar which pervades the mill is healthful and agreeable. His cut of cedar shingles this season will amount to four million—pine shingles, one million. Mr. Fee exports to Oswego, Albany, Troy and other United States markets, and also does a large trade in fence posts and telegraph poles. He intends next season to retire from the milling business to his farm, near Lindsay, where he has this spring erected a large brick dwelling, and where he will carry on butter and cheese making on an extensive scale. As the mill is fitted up with powerful steam engine, circular saw for cutting lumber, planing machine, as well as the most improved shingle making machinery, Mr. Fee's retirement will make a good opening for some enterprising party acquainted with the lumber business.

Mr. Burke has a good shingle mill, on the upper side of the locks, which is turning out a fair quantity of first-class shingles daily.

The other principal industries of Lindsay are, two tanneries, a woollen factory, brewery, stave factory, chair factory, sash and door factory, a carriage factory, and a large flouring mill, working day and night, grinding 8,000 bushels of wheat, yet on hand of last winter's purchase. Over a dozen steamers of various sizes ply on the Scugog and Bobcaygeon waters, engaged in freight, lumber and passenger traffic between Fenelon Falls, Bobcaygeon, Lindsay, and Port Perry.

GALT.

The new saw mill recently erected by George Hespeler, Esq., (P. McGregor, manager,) has a stock of logs on hand to cut for the season of 800,000 feet of pine and 200,000 feet of hardwood. The machinery, 5 ft. circular saw, edger and butting saw,—all of the most improved pattern—are driven by a 35 horse-power steam engine from Goldie & McCulloch's establishment. The mill works well and will have the sawing finished early this summer.

HAMILTON.

The "Ambitious City" is full of business energy at the present time. Workmen of all kinds are in good demand and wages high. Railway freight trains daily bring in car after car loaded with square timber and lumber of all sorts and sizes. The demand is greater than the supply. Near the Great Western the harbor looks like one of the Quebec coves. Men are busy rafting. Withs and traverses are piled in heaps along the wharves. The old immigrant sheds are taken possession of by the jolly shanty men, who find them roomy and commodious dwelling places.

Messrs. Flatt & Bradley have made up and despatched two rafts of 100,000 feet each, which have arrived safe at Quebec. Another raft of 125,000 will be ready to leave on Monday (13th June.) The rafts are composed of oak, elm, ash, pine, whitewood, maple, cherry, walnut, and hickory, square and round. Messrs. Flatt & Bradley have yet to arrive by train about 300,000 from all parts of the surrounding country. They have about 40 men employed in rafting.

Messrs. McArthur Bros., of Toronto, have despatched two rafts from Hamilton, averaging about 100,000 feet each—mixed timber. Another raft, nearly ready, will take the balance they expect to have at this port.

Messrs. McCrae & Murphy sent one raft out early in May, and are making up another which will clean up their stocks. Timber mixed, oak, &c.

Mr. John Durkin, of Quebec, has sent away one raft—has another ready, and a small raft yet to make up.

Mr. J. Lattimer, Toronto, has one raft nearly ready, which completes his stock on hand,

Messrs. D. & J. McCrae are loading a vessel with staves and plank for Collins' Bay.

Messrs. Flatt & Bradley have shipped four cargoes this season of oak and hickory to Garden Island to be forwarded to Quebec.

Building operations are brisk. Mr. Robert Chisholm is making good progress with the large cotton factory now in course of erection. The main building is 362 ft. long by 50 wide, with a number of wings and additions. The engine-room is 45 ft. by 33. Picker house 52 by 40 ft. There are three floors in the main building, supported by 250 oak columns. The beams are 50 feet long, and 12 by 14 inches, formed of three pieces, beaded, 4 inches thick, and bolted with ¾-inch bolts 18 inches apart. Foors double laid on the joist, or beams, forming a ceiling. Messrs. Brennen & Son, lumber merchants and manufacturers, supply the lumber, doors, sash, etc. There are three hundred windows in the main building. Mr. Chisholm has just finished the Hamilton Provident and Loan Society's buildings—a magnificent block with two fronts of Ohio freestone. Another large building is being erected on King street, with two fronts of brown freestone from the Caledon or Georgetown quarries, said to be superior to the Ohio freestone in durability and facility of working.

The Emery Wheel Manufacture or Hamilton Hart Wheel Company, have very complete premises, and seem to be doing a large business. Corundum is used freely by this company, and is said to be superior to emery.

MR. LEACH'S shingle mill was burnt to the ground on May 31st. The fire caught from a smudge they had to chase mosquitoes.

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DEAR SIRS—Your Patent, Automatic, Self-Feeding Saw Gummer is a perfect success.
Yours, &c., E. MORS & CO., Lumber & Timber Dealers.

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GENTS—I am using one of your Patent Automatic Self-Feeding Saw Gummers at each of my three mills, and I would not take one hundred dollars for it if I could not get another like it.
Yours truly, WM. ANDERSON.

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GENTLEMEN—The Patent Automatic Self-Feeding Saw Gummer we bought of you just fills the *bill exactly.* We gummed a sixty-inch saw with sixty teeth, cutting on an average of three-fourths inch deep to each tooth, with one cutter without sharpening it.
Respectfully yours, WHEELER & WILLIS.

THE CUTTER OR BURR referred to in the above, (⅜ in.) cost **90 CENTS**, it takes one-half minute to each tooth, and the saw is gummed without removing it from the mandrel. ☞ALL SAWY ERS know this is a great advantage, besides a saving in time.

We challenge **ANY** saw tool manufacturer in the United States to produce such an array of unsolicited testimonials as we have received for our GUMMER AND SWAGE.

Of course we have not room here for an extended list.

Our goods are now so well established throughout the country, that information can be easily obtained as to their practical working from any of the **Several Thousand** Sawyers who have them in use.

In short the MIXTER GUMMER is pronounced by *all* to be the "**BOSS GUMMER.**"

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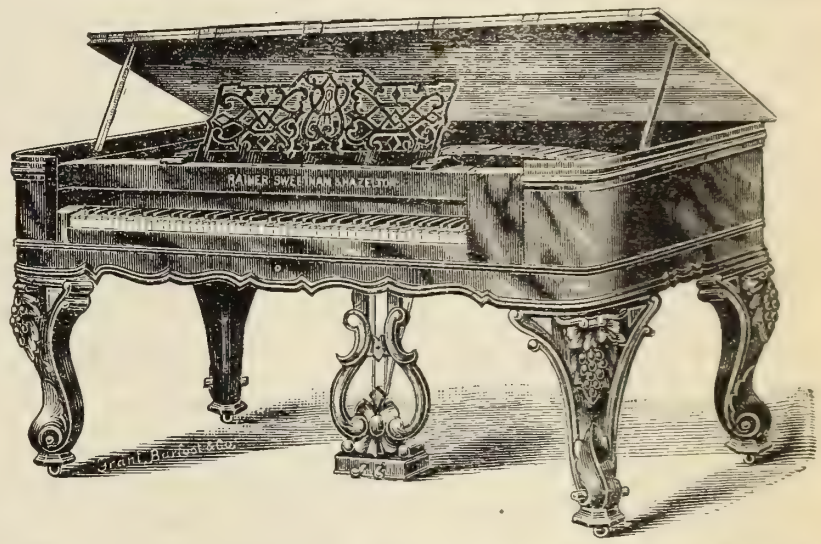

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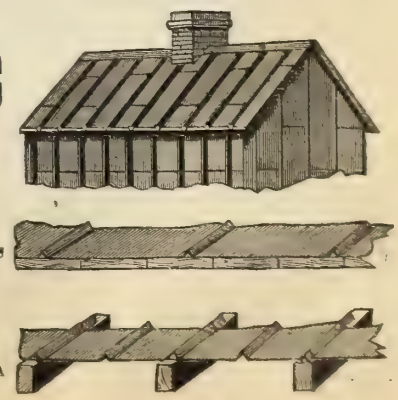

NOTES BY THE WAY.

UXBRIDGE.

Mr. J. Gould cut last spring about 400,000 ft. of custom logs at his water saw mill, Uxbridge, 41 miles from Toronto. Of this about one-half was pine, and the balance hemlock and hardwood. He has, of his own stock, also cut 50,000 ft. of hardwood, 40,000 ft. basswood, and 250,000 ft. of pine—having yet on hand 350,000 feet pine to cut, which will be finished by the end of July.

Mr. Wheler, of Uxbridge, is getting through with cutting his stock of about 400,000 feet of pine. The demand is good, both locally and for export by the Toronto & Nipissing Railway, all along the line from Coboconk.

LONGFORD.

Two "burners" have been erected by Mr. W. Hamilton, of Peterborough, for the Longford Lumber Co., for the convenience and safety of consuming the refuse from the Longford mills. They are built of boiler plate. The larger of the two is 80 ft. high and 60 ft. in circumference at the base. They are bottle-shaped, and lined inside to the thickness of 18-in. and height of 32 ft. with fire brick, brought from Scotland. The largest burner is capable of consuming the refuse of the sawing of 80,000 ft. in a day of 11½ hours. The smaller burner is about one-fifth less than the other. Mr. Thompson, the manager, has 6,000,000 ft. of logs in the lake (St. John) at the mills, and 10,000,000 on the river. The mills are running at their greatest capacity and on full time. Twenty-seven loaded cars of lumber left the yard one day, week ending 31st May.

WASHAGO.

Mr. John Stewart's shingle mill, on lot 15 in 9th con. of North Orillia, was destroyed by fire on the 15th May. The machinery is being repaired at Brammer's, Orillia. Mr. Stewart is to have a circular-saw put in along with the shingle machinery, and expects to be running again the first week of June.

DARTMORE.

Mr. John Fleming, of Dartmore, Atherley station, Midland railway, had his shingle mill burned on the 24th May. The mill was driven by water, but the fire communicated from burning refuse. About $100 worth of shingles were consumed. No insurance. Mr. F. will re-build at once, and put in a circular-saw at the same time with the shingle machine.

GOODWOOD.

This is a lively lumber station, 34 miles from Toronto, on the Toronto & Nipissing Railway, having two good saw mills run by steam. Clark's mill will cut two million logs this summer. Mr. Davidson, manager, is filling two orders from the Dominion Government for lock-gates' material for the Welland and Lachine canals, viz.: Sawn timber, 30 ft. long and 7½ to 10×24½ in. wide. The timber is of excellent quality.

The other mill at Goodwood is run by J. & G. Besse & Co. They will cut 1¼ million feet this season, and are shipping daily to Toronto, with good demand for all they can get ready, and with orders ahead for next winter. There is also a planing machine connected with this mill.

ORILLIA.

Messrs. Miller & Vansickle have lately finished their new steam saw mill, near the Midland railway station, Orillia. It is fitted up with all the latest labor-saving machinery, and to those improvements are added some new contrivances invented by the proprietors of the mill. The present stock of logs at hand is being cut for the Flos Lumber Co.—Mr. Orr, manager, Barrie. The mill is running full time, and a shingle machine will soon be added to the lumber cutting machinery.

Mr. Andrew Tait is carrying on a lively trade in supplying lumber and shingles from his mill at Orillia, as well as from some smaller mills along the Midland, westward, which are furnished by him.

PARRY SOUND.

The logs of the Parry Sound Lumber Co. (J. C. Miller) are all afloat, and the mills are working to their utmost capacity. This spring a very large "burner" has been erected at those mills to consume the sawdust and refuse. It is shaped like a champagne bottle, and constructed of boiler plate and lined 30 ft. up with fire brick. The height of the "burner" is 100 feet, with a screen 17 feet high on the top, in all 117 feet. It is 22 feet in diameter at the bottom and 12 feet at the top, and gives the mills a business like appearance from the approach to the Sound.

Sales on the Georgian Bay are brisk.

The drives in Parry Sound and Muskoka districts are getting along slowly, and unless more rain falls soon on the North Seguin, a considerable quantity of logs will be left over.

On the North Seguin, the Ontario Bank will have about 20,000 pieces hung up, but on the South Seguin it is expected all will be got down. The Ontario Bank sold recently at their mills at Parry Harbor, about four and one-half million feet of lumber to J. C. Miller, at an average of $10 per M. cash.

SALE OF TIMBER LIMITS.

Berths Nos. 128, 136 and 137, on Serpent River, near Bruce mines, were recently sold by Mr. J. C. Miller to Mr. H. H. Cook for $20,000 net cash. It is stated that the same limits are now under offer to parties from Grand Rapids, Mich., at $40,000. The same parties have the refusal from Mr. Miller of berths 85, 92,107, 119 and 124 on the Spanish River, at $50,000.

On the 23rd of May, Mr. A. M. Spratt, of Alpena, Mich., purchased the north 37 square miles of the Township of Armour, in the Parry Sound district, from Mr. J. C. Miller for $15,000, and next day re-sold the berth to Messrs. Burton Bros., of Barrie, for $17,750. This was a handsome profit for Brother Jonathan to make on the bargain. The timber limits on the north shore of Georgian Bay are becoming very valuable, as the Muskoka region is getting thinned out.

THE CHAUDIERE PLANING MILLS AND MACHINE WORKS.

These industries were established many years since by Mr. A. H. Baldwin, Chaudiere Island, Ottawa, then one of the leading sawn lumber merchants and mill owners, who has since retired from business in favor of his son, Mr. W. H. Baldwin, and his son-in-law, Mr. James Parr, present proprietors.

The planing mill was started in 1870, the machinery of which, however, was removed in 1876 into a new building erected for the purpose, which is 80 ft. by 30, two storeys high, and contains three planers, moulding machine, re-sawing machine, turning lathes and the usual swing butting, edging and gig saws. Every description of house furnishing lumber is manufactured, such as clapboards, flooring, scroll work and mouldings of all kinds, etc., full assortments of which are kept in stock and stored in large sheds adjoining the mill. When we visited the works a quantity of water elm was being cut for the inside finishing of a public building at Winnipeg, Man.

The machine shop and foundry, laso run by Messrs. W. H. Baldwin & Co., which are built of stone, were erected and fitted up by Mr. A. H. Baldwin in 1868, and afterwards sold to the owners of the Victoria Foundry, but subsequently lapsed back to the original founder, remaining idle, owing to the depression, for three years.

The machine shop which is now in full operation, 30×60, three storeys high. The first and second flats are equipped with five lathes, two planers, two vertical drills, a large bolt cutter, shaping machines, etc. The upper flat is occupied as a store room for the various patterns kept.

The blacksmith shop has two forges and the usual other appliances.

The foundry, built also of stone, is 35×60, and contains a cupola, blast and cranes for lifting heavy castings.

The appurtenances are complete in every department of the works for the manufacture of every article required in general and mill and steamboat machinery, which is a specialty of the firm, who aim at promptness and durability both in new work and repairs.—*Our Cheerful Friend.*

The great Marvel of Healing—the grand climax of medicinal discoveries is Burdock Blood Bitters. It cures all diseases of the Blood, Liver, Stomach, Bowels, Skin and Kidneys, Female Complaints, Scrofula, General and Nervous Debility, and is a reliable Tonic in all broken down conditions of the system. Sample bottles 10 cents. Supplied by all dealers in medicine.

CONSUMPTION OF LUMBER IN TORONTO.

From Our Own Correspondent.

I have been endeavoring to collect a few statistics relating to the retail lumber trade in this city, but find it exceedingly difficult to procure figures that can be fully relied upon. The reasons for this may be explained as follows: Upon interviewing A. he gave me a long column of figures purporting to be a correct statement of his sales from the yard during the year 1880. Upon enquiry, however, I found that included in this statement are sales by car load, made by him to B. and C. who are also yard men, but had bought several cars from A. to retail from their yards, A. happening to have the particular kinds of lumber they needed. Upon making application to B. and C., they in turn informed me they had also sold considerable by car loads to other retailers, all of which was comprised in the figures handed me as being yard sales. Other retailers informed me they could not give me the quantities they had sold, but could give me the figures in dollars and cents, so that to obtain figures that may be taken as reliable is simply impossible. Another serious disadvantage under which the retailers labour here, is the want of organization or cohesion amongst themselves; they seem to view each other with a kind of suspicion and distrust, so that each man, so to speak, runs on his own track, heedless as to what his brother chip may be doing. As witness the following experience when visiting a few of the yards: Questioning the first I called upon as to what price he obtained for joisting and scantling up to 16 ft. lengths, his answer was $11.00 per M.; on repeating the question to No. 2, his reply was $11.50 per M., and No. 3 stated he would not sell under $12.00 per M., so that it virtually seems to be a matter of go-as-you-please amongst them. Now this is certainly not as it should be, and nothing tends more to demoralize the trade than such want of unity, but if a Lumbermens' Exchange was once in proper running order, so that grades could be properly established, prices regulated, and dead-beats shown up, and in short, a thorough interchange of ideas take place between one another, it would certainly be greatly to the advantage of all concerned.

Another evil under which retail men are laboring here, and one which could easily be abated by acting in concert, is the custom in vogue amongst mill men of supplying consumers by the car load, at rates as low, or nearly so, as that charged to the retail trade, even going the length of bringing down half a car for a consumer and disposing of the remaining half car to the retailer. Now, this is certainly unsatisfactory both in principal and common justice to the retail men, and the yard men could soon apply the remedy if thoroughly in earnest. Doubtless some of your readers will remember the tactics used by the retailers in Chicago to remove the same trouble and in which I believe they were thoroughly successful; it operated in something like the following manner: After notifying the wholesale men that hereafter, they, the retailers, would demand a royalty of $— per car according to grade on all lumber sold to consumers, they calmly waited and watched. Some of the wholesalers laughed and derided at the demand as something preposterous, but those who disregarded the demand soon found to their cost that they had not all the laugh to themselves. The retailers simply black-balled all such which meant nothing more or less than this: We purchase no more lumber from you until you accede to our demands; and in this way the remedy was prompt and efficient, and there is no reason why the same means could not be adopted and carried out here, and to the ultimate benefit of all concerned. The lumberman is generally termed the prince of good fellows, but sometimes there crops out amongst the best of them a slight disposition to grasp at all the trade within their reach, and this is more often the case amongst wholesale men, so that in dull times especially, the course taken by them in the matter of selling to consumers, has driven many of the retailers to the wall and has ultimately been a cause of considerable loss to themselves.

During the year 1880 there has been sold from the yards here in round numbers:—30,000,000 ft. lumber, 13,000,000 shingles, 15,000,000 sawn lath, and in addition to this there has been sold by car loads to consumers, direct, as much more, besides a considerable quantity sold by the factory men, who all do more or less of a retail lumber business, and the sales of the present year bids fair to far outstrip that of its predecessor, as buildings are springing up in every direction; and it is much to be regretted for the future of Toronto that many buildings now being erected by speculators, are of such material and workmanship as not to add to the future glory of this the Western Metropolis. Still there are a number of quite pretentious and substantial buildings now going up; and one thing to be noticed is, that the architects are now demanding that all lumber used in the construction of good buildings shall be fairly dry, so that this will necessitate a much larger stock of lumber to be kept on hand by retailers, to meet the demand in this respect. To sum the whole matter up, the building trade is now fairly booming and all concerned feel correspondingly jubilant.

HOW CHICAGO YARD PRICES ARE FIXED

At a recent meeting of the Lumbermens' Exchange in Chicago, the following were unanimously passed:—

Resolved, That on the 27th day of each month a meeting of the yard dealers shall be called to go through the price list, making such alterations as to them may seem wise; that said list, so amended on the 27th of each month, shall be in force on the first day of the succeeding month, and shall be the standard of prices at which orders shall be filled, until its successor comes out on each succeeding month; *Provided*, that should any change in prices be considered advisable prior to the 27th of any month, a meeting of yard dealers shall be called, and their action shall be binding on all orders received after a lapse of twenty-four hours.

Resolved, That when a price list is agreed upon and adopted at any yard dealer's meeting, it shall become obligatory on all yard dealers to issue no list, either printed or hektographed, nor to advertise in any newspaper at any less prices than established at said meeting; and should any firm think that prices as fixed at any time are higher than the market will justify, then, on notice to the president and secretary, a meeting of yard dealers shall be called, before any reduced list or advertisement is sent out.

YOUNG'S POINT.

From Our Own Correspondent.

SAW LOG DRIVE.—On the 27th ultimo a large drive of saw logs, consisting of 45,000 pieces, passed through here *en route* to Messrs. Ullyott & Saddler's mills, Harwood, under the charge of Mr. P. Bergin, foreman. The men on this drive were the best conducted that has passed through here for some years. The foreman is a shrewd business fellow, and the men under him seemingly work with a will.

Worth Preserving.

The following figures are worth remembering, as they will save a great deal of calculation and give approximately accurate results with a minimum of labor:—

A cord of stone, three bushels of lime and a cubic yard of sand will lay 100 cubic feet of wall.

Five courses of brick will lay 1 foot in height on a chimney. Nine bricks in a course will make a flue 8 inches wide and 20 inches long; and 8 bricks in a course will make a flue 8 inches wide and 16 inches long.

Eight bushels of good lime, 16 bushels of sand and one bushel of hair will make enough mortar to plaster 100 square yards.

One-fifth more siding and flooring is needed than the number of square feet of surface to be covered, because of the lap in the siding and matching of the floor.

One thousand laths will cover 70 yards of surface, and 11 pounds of lath nails will nail them on.

One thousand shingles laid four inches to the weather will cover 100 square feet of surface, and five pounds of shingle nails will fasten them on.

BUFFALO has in all sixty-six lumber dealers. Tonawanda has twenty-seven.

Chips.

B. YOUNG & Co. have completed the new chimney to their mill. They have in Half Way River Lake no less than 5,000,000 feet of logs.

MR. HUGH MACKAY, Crown Lands Agent and Collector of Customs at Parry Sound, died suddenly on the 28th ult., from the bursting of a blood vessel.

PRICE & Co., West Brook, are erecting a store at West Brook crossing. They have stopped sawing at their steam mill—their logs being for the present "hung up" for want of water.

SEVERAL rafts of cordwood were being unloaded near the foot of Broadway street, Winnipeg, on the 27th ult., where a number of men are working constantly in the water up to their waists for the purpose of fishing it out.

AN enterprising Vancouver, B.C., man, Mr. B. L. Morrison, has this season shipped to San Francisco 800,000 hoop-poles, and has 600,000 nearly ready for shipment and more coming. He has shipped as high as 2,000,000 in one winter.

A CORRESPONDENT of the *Country Gentleman* says that he saw 100 black locust posts which had been 22 years planted, and that they were sounder below the ground than above, and would be good posts for at least another 20 years.

A FLEET of nine flatboats of lumber, shingles, etc., arrived at Winnipeg on the 28th ult., from Moorhead, having been brought down by J. Morris. About two weeks were spent on the way. The freight was brought to Moorhead Minneapolis by rail.

LEWIS RIVERS, ESQ., of St. John, has become manager for Thos. L. DeWolf & Co., at their new mill, at Diligent River. This mill will be completed this fall. It will cost some $20,000. The firm have some 5,000 acres of land to log from and they have 3,500,000 logs out.

A FEW years ago the idea of exporting bobbins would have been considered extremely impracticable, but now the diminishing timber supply of the old world has forced her to call upon us for these articles. A Lawrence, Mass., firm is in receipt of large orders for them from England.

A STEAM saw mill near Oakland, Md., was blown to atoms by the explosion of a boiler. The fireman, Marshall Butler, was blown six hundred feet, and driven head foremost under some old logs. One boiler was carried one thousand feet up the hill side.

DURING 1879-80, Ontario has shipped to the United States $109,970 worth of house-hold furniture, and a little to the West Indies; Quebec sent $3,319 worth. Doors, sashes, and blinds were sent from both Provinces to Great Britain. Other manufactures of wood, unspecified, went from Ontario, Quebec, Nova Scotia, and New Brunswick to Britain, and the States and the Indies to the value of $262,000.

WE have had a visit from Mr. Little, an experienced lumberman, who some seven or eight years ago prophesied the extinction of the American lumber supply in ten or twelve years, and thereafter the accelerated extinction of our own. He still thinks, notwithstanding the extreme slackness of the lumber trade for the large part of the time since his pamphlet was published, that his calculation is not far from correct, and that in ten years from now America will have to look for her lumber in European forests. People in Canada are, as a rule, too busy to take up questions of this sort seriously. A rumor once started in England about the possible exhaustion of the coal supply created national alarm, and provoked parliamentary investigation. Mr. Little's warning of danger to our leading industry is more or less borne out by the opinion of all experts whom we have consulted on the subject, and it seems time that the matter should be looked into.—*Montreal Witness.*

A Good Location.

THE CANADA LUMBERMAN could not easily have got into a better "location' than the Peterborough REVIEW offices. Messrs. Toker & Co. will not spare either talents or money in rendering the paper all that its name impiles. The LUMBERMAN has been restored to its original size, 16 pages.—*Orillia Packet.*

STEAMSHIPS AND THE TIMBER TRADE.

The constantly increasing number of steamships in the timber-carrying trade will not be wondered at by those who take note of the immense quantity of steam tonnage annually turned out in this country from the great building yards in the north. The mystery will be, by and by, how sailing vessels are to get a living at all, in any trade, against the opposition of steam, which can accomplish so much more in less time and at a lower rate of freight than the sailer can live at. Mr. C. Moller's recently issued steamship circular furnishes some remarkable information on this important subject. From it we learn that since the 1st of January no fewer than 78 ships, measuring about 118,000 tons gross, have been added to the large fleet already afloat. Nevertheless, there were still at the beginning of April about 800,000 tons of shipping on the stocks, much of which is specially adapted for Atlantic service. The American trade is daily gaining more and more in importance, owing to the large increase in emigrants from Europe and live stock and provisions back. Of new ships there are not many offering for sale, and these can only be had at full prices; but by degrees, as the new ships become available, more second-hand boats are coming into the market, and many of them, having been supplied with new boilers, have become very useful ships, and can be bought at reasonable prices. Most of the principal builders are full of work for some time to come, but still orders can be effected on previous terms.

There will, of course, come a time when many of these ships will not be wanted for the trades on which they were intended to run. Some will fall out of it by age and disability, and others on account of being superseded by new ones of larger size or of greater suitability, and the timber trade will most likely pick up the stragglers, which will not require much alteration to adapt them permanently to the trade, and by and by others will be built, in all likelihood, of light draught of water to go anywhere, and to anything that a small coaster can now accomplish.

Though they are rather backward this spring, steam and iron together are creating a revolution in the timber-carrying trade, which is more and more obvious to us as every fresh season comes round. Two results may be expected from this change, which will be claimed as publicly beneficial—it will keep timber down in price, and prevent there ever being any scarcity of it.—*Timber Trades Journal.*

Carbonized Timber.

Herr Gopport has recently exhibited a piece of pine which has been submitted for two years to a pressure of 12½ tons in a Silesian mine. It had been compressed to one-fourth, and had been converted into a half-carbonized state through the action of pressure alone, as little moisture had access, and the temperature was never above that of the surrounding atmosphere. It had quite the appearance of a dark brown colored bituminous wood of the tertiary brown coal formation, but it was without the smell observed in burning bituminous wood. The change of volume was at the cost of the water-content of the wood. A considerable amount of oxygen and hydrogen had come off as water; and the composition approximated to that of peat of the older peat formations.

Chicago's Imports of Canada Lumber.

We learn from the *Northwestern Lumberman* that the imports of lumber into Chicago from Canadian ports during the last three years has been as follows:—

1878	7,751,000 feet
1879	837,000 "
1880	755,000 "

A Healthy Change.

THE CANADA LUMBERMAN has changed hands, and will hereafter be published at Peterborough by Messrs. Toker & Co., proprietors of the Peterborough REVIEW. Judging by the initial number under the new management, we must say that the change appears to be a healthy one. We wish our contemporary much success from their new aquisition.—*North Shore Miner.*

THEY ALL DO IT.—Everybody uses "TEABERRY" for the teeth and breath, the newest, brightest, cosiest ittle toilet gem extant. Try a 5 cent sample.

Wanted.

A SECOND HAND DOUBLE EDGER; also a LATH MACHINE, both in good repair. Reply stating lowest cash terms or particulars to Box 1002, Peterborough. L10

For Sale.

A 40 INCH LEFFELL WHEEL and COMPLETE CIRCULAR RIG, all in good order, suitable for a fifteen foot head. Apply to Box 1002, Peterborough. L10

Allandale Junction Hotel

Travellers by Northern Railway have 15 to 20 minutes by all trains, for refreshments. Solid meals. Tea and coffee at counter. Fine brands of Liquors and choice Cigars. b17 E. S. MEEKING, Proprietor.

Orillia House,

ORILLIA.

New and Commodious Brick Building; best north o Toronto; splendid sample rooms; centrally located; free 'bus. b20 JOHN KELLY, Proprietor.

The Queen's Hotel,

TORONTO, CANADA.

McGAW & WINNETT, Proprietors. Patronized by Royalty and the best families. Prices graduated according to room. b20

St. Lawrence Hall,

PORT HOPE.

Is noted for its superior home-like comforts—a well kept table, equalling the best hotels in Toronto, and large, well-furnished rooms. Good sample rooms on ground flour. Walton Street, Port Hope.
b26 WM. MACKIE, Proprietor.

Caledonian Hotel,

GRAVENHURST.

JOHN SHARPS, Proprietor. This Hotel has been newly opened out, pleasantly situated on Main Street, within five minutes walk of Northern Railway station. Bar kept with best assorted Wines, Liquors and Cigars. Every attention paid to guests. Good Stabling. 1yL15

St. Louis Hotel.

THE RUSSELL HOTEL CO., Proprietors.

WILLIS RUSSELL, Pres., Quebec.

This hotel, which is unrivalled for size, style and locality in Quebec, is open throughout the year for pleasure and business travel. b18

Queen's Hotel,

BRACEBRIDGE.

JOHN HIGGINS, Proprietor. The proprietor (late of Georgetown,) having lately purchased the above hotel,) will endeavor to make it one of the best houses in the District of Muskoka. Tourists and hunting parties will receive every possible attention. Free 'bus to and from steamboat wharf. Terms, $1 per day. b20

The American Hotel,

BARRIE, ONT.

Collier Street, Adjoining the Market.

RATES REASONABLE, CENTRAL LOCATION, FREE BUS TO AND FROM ALL TRAINS.

☞ Every accommodation for Commercial and LUMBERMEN.
L14 W. D. McDONALD, Proprietor.

Fraser's Hotel,

GRAVENHURST, ONT.

HENRY FRASER, proprietor, (successor to Dougland Brown.) Mr. Fraser having purchased and thoroughly renovated and refitted that old established hotel, so long and popularly kept and owned by Dougland Brown, in the Village of Gravenhurst, is now in a position to attend to the wants of the travelling and general public. Parties *en route* to the Muskoka District, will find "Fraser's" a comfortable stopping place. The Bar and Larder are well furnished. Convenient Sample Rooms for Commercial Men. Good stabling and attentive hostler. Free 'bus to and from trains and steamboats. b26

SAWYER, ENGINEER & MILLER

A PRACTICAL MAN to take charge of a Saw Mill, Shingle Mill, one run Flour Mill, with power sufficient to run alternately, situated on Duck Lake, N. W. T., 500 miles west Winnipeg. Engagement for a year and expenses paid. Apply immediately, stating experience, reference, salary expected, when could leave. A man accustomed to our machinery preferred.
1L14 WATEROUS, BRANTFORD.

D. S. BRIGGS,

9 TORONTO STREET, TORONTO.

WHOLESALE DEALER IN

Clear, Pickings, Common and Hardwood Lumber, Lath, Shingles, &c.

BILL STUFF CUT TO ORDER.
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LUMBER MERCHANTS

And Shipping Agents.

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JAMES HADDEN,

MANUFACTURER OF

Shingles and Dressed Stuff.

Foxmead, P. O., County of Simcoe, Ont.

Two Planers for sale or exchange for a Boiler. b26

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The undersigned keeps Canoes suitable for LUMBERMEN, SPORTSMEN and others constantly on hand. Price List on application.

WILLIAM ENGLISH

8L14 PETERBOROUGH, ONT.

New Files Manufactured from the BEST English Cast Steel and Warranted equal to the Best Imported File.

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Old Files RECUT BY HAND, and EQUAL TO NEW FOR USE

PRICE LIST on application.

THOS. GRAHAM, Manufacturer,

35 Sherbourne St., Toronto. 6L11

To Lumbermen.

The Subscriber makes to order all kinds of

TENTS,

Hammocks, Tarpaulins, Waggon and Horse Covers,

☞ Also dealer in all kinds of OIL SKIN Clothing, Nets and Seine Twines.

An is also Agent for the best makes of AMERICAN COTTON DUCKS in all widths.

J. LECKIE,

6L12 46 Front Street E., TORONTO.

IRWIN & BOYD

Commission Lumber Dealers,

FORWARDERS,

Shipping and General Agents

PORT HOPE.

TRUSSES.

CLUTHE'S PATENT SPIRAL TRUSS all attachments improved. No more buckles, all on solid brass casting. Book on rupture and human frame free. Send address in full post card. Best true information about rupture and deformities. CHAS. CLUTHE, Surgical Machinist, 118½ King Street west, Toronto. 12L13

Market Reports.

TORONTO.

From Our Own Correspondent.

TORONTO, June 9th, 1881.—Since my last report, common lumber has advanced in price on this market, although I think it is more than questionable, if the advance can be sustained to the end of the season. The production of common lumber in proportion to clear and picks increase every year, and the stock of common lumber to be marketed this season will be far in advance of any preceeding year, and unless prices advance in the American markets a large quantity of common lumber must either be held over at the mills or placed on the Canadian market, so that should my impressions in the latter respect be verified, present prices will not hold out to the end of the present year.

Shipments from this port still languish, so that dock hands and vessel captains are not in the best of spirits, and considerable ill-temper is naturally displayed in consequence, but it is the general impression that the 1st of July will witness a more rapid movement of lumber, as by that time it is expected the change of guage on the lines of road (mentioned in my last letter) will have been made, and rolling stock supplied to meet all demands, a matter most devoutly to be wished for.

Since my last letter building matters have been making rapid strides, and over one hundred more buildings have been started in this city and the adjoining village of Parkdale. This would seem to indicate a rapid increase of population, although this cannot be taken as a proper guide in that respect, as many people prefer new houses and fresh localities, and as a consequence, there are a large number of the older houses tenantless.

Prices at the yards rule as follows :—

Mill cull boards and scantling	$ 9 00
Shpping cull boards, promiscous widths	11 00
" " 10 and 12 in. stocks	12 00
Scantling and joist, up to 16 ft	$12 00
" " " 18 and 20 ft	13 00
" " " 22 ft	13 50
" " " 24 ft	14 00
" " " 26 ft	15 00
" " " 28 ft	16 00
" " " 30 ft	17 00
" " " 32 ft	18 00
" " " 34 ft	20 00
" " " 36 ft	22 00
" " " 38 ft	26 00
" " " 40 to 44 ft	30 00
Cutting up plank and boards	16 00
Sound dressing stocks	15 00
Picks Am. inspection	24 00
Three uppers, Am. inspection	30 00
XXX sawn shingles, ₱ M	2 50
Lath	1 60
1½-inch dressed flooring	28 00
1¼ " " "	24 00
1 " " "	20 00
⅞-inch beaded and matched sheathing	20 00
Dressed clapboarding	12 50

Sixteen ft. lengths dressing stocks are scarce and in demand. Shingles will likely advance before long ; at present prices for lumber shingles should command at least $2.75 per M from the yards, and as the demand from the American market comes in later on, doubtless shingles will advance above present prices.

CHICAGO.

CHICAGO, June 1st, 1881.—The receipts of lumber at this port during the past week have aggregated 51,751,000 feet, and of shingles 24,062,000. Of these, a fair proportion has been sold on the market at the Franklin street dock, though by far the greater bulk has at once proceeded to the yards, for which it had been purchased before arrival. Taking the season as a whole, the receipts have not yet reached the aggregate to the same date last year by 11,299,000 feet of lumber and 20,395,000 shingles. For the week the receipts of lumber have been larger than for the correspondiug week of 1880 by 2,738,000 feet, the shingle receipts have fallen short 1,991,000.

Prices during the month of May at the cargo market were, as our readers know, somewhat unsettled, owing to the difference of opinion between buyers and sellers as to the value of lumber. For some time the market showed signs of weakness under the persistent endeavors of the bears to pull it down, dropping from $10 on piece stuff at the opening, to $9.50 on the 13th, and as low as $9.25 on the 23rd. The past week, however, prices have advanced to nearly, if not fully, the opening quotations. During the closing days of the month a decided firmness the ideas of values do not materially differ, for of feeling developed, and for the past two or three days, green piece stuff of ordinary length has sold up to $9.50 and $9.75, while a fair admixture of lengths above 16 feet, has readily commanded $10, and at this writing we may truthfully speak of the markets as firm and quiet at these quotations. This, in face of the fact that the receipts since Sunday have been larger than for some days, leads to the opinion that the tendency of the market is to still higher figures. Sales of one-inch lumber may be quoted at from $12.50 for ordinary green, to $14.50 on a better grade, while $16 and $17 have been paid for fair to good mill run. Dry lumber has brought $1 above these figures, and is quick at from $16 to as high as $22, according to richness in picking qualities and condition of seasoning. Shingles have participated in the firmness, and standards which have sold as low as $2.40, are now steady at $2.45@2.55. Extra A's, which have sold at $2.45@2.50 now command $2.55@2.65. Lath have not fluctuated so much, and we quote from $1.60@1.65 for green and Norway, to $1.80@1.90 for dry. Selected pickets have brought $11.75 ; common, $7 and $8.

The general tone of the cargo market is much firmer than at any time since the opening of navigation, and the opinion is expressed by both bulls and bears that the firmness will continue.

CARGO QUOTATIONS :

Joist and scantling, green	$ 9 50@ 9 75
Mill run, choice green	16 50@19 50
Mill run, medium, green	12 50@16 50
Mill run, common, "	10 50@12 50
Shingles, standard	2 45@2 55
Shingles, extra A	2 55@2 65
Lath	1 60@1 80

LAKE FREIGHTS.

Manistee	$2 25
Muskegon	1 75
Ludington	2 00
Grand Haven	1 75
Menominee	2 25
Sturgeon Bay	2 25
White Lake	1 87½
Ford River	2 12½

Receipts and shipments of lumber and shingles for the week ending May 31 :

	Receipts.		*Shipments.*	
	Lumber.	*Shingles.*	*Lumber.*	*Shingles.*
1881	51,751,000	24,062,000	26,819,000	4,509,000
1880	49,013,000	26,053,000	16,279,000	1,034,000

Receipts and shipments of lumber and shingles from January 1 to and including May 31 :

	Receipts.		*Shipments.*	
	Lumber.	*Shingles.*	*Lumber.*	*Shingles.*
1881	304,729,000	144,327,000	246,901,000	43,301,000
1880	315,028,000	164,722,000	226,512,000	37,061,000

Trade at the yards is of a feverish nature. Nearly every dealer admits that doing business on the margin between cargo and price list figures is not profitable, just now, yet nine out of ten of them are doing business on even a smaller margin. It is safe to say that that proportion of the yard men are selling under the list, and if a dealer is not willing to say so, his neighbor is not backward saying it for him. Some declare that the cut is on undesirable stock only, others, in plain words, that a reduction is made in order to hold customers. We saw a bill of Number 2 fencing sold at $10.25, that is put down on the "re-affirmed" list at $11.50, and the buyer assured us he could purchase any quantity at these figures. Dimension that is billed at $13 we heard offered, and refused, at $11.50.

It is almost impossible, just at this time, to make a quotation of yard prices that will accurately represent the market. It is admitted by nearly everybody that lumber does not bring the prices named in the "official" list, but the dealers, as a rule, dislike to say what they really do get for it. It is claimed by some that the better qualities of stock, such as finishing lumber, wagon-box and stock boards, sell pretty nearly up to the quotations, while others maintain that the list is shaded from fifty cents to $1 on sales of any magnitude. We quote a range on dressed and matched flooring that we believe covers the market fairly. Occasionally the inside prices given may be cut a trifle more, but when this is done the trade is generally an exceptional one.

The cut in prices is, of course, brought about by everybody except the man with whom you are talking. Those who are bullishly inclined say the bears are bound to break the market, and the bears say the bulls stand ready to underbid them every time. Whoever is to blame, the bids on a bill of considerable size that went the rounds did not vary much. We think, however, there is no question but that in certain directions there is a firmer feeling than existed two or three days ago. The firmness of lumber by cargo affords the best reason for the belief that it cannot be bought from the yards much longer at present prices. There is certainly no money in handling lumber for those who have to buy it on the market, and unless there is a speedy decline there, which is something hardly anyone looks for, we do not see how they can afford to do it at the figures now ruling. The *Lumberman* is therefore inclined to to think that this market has about touched bottom.—*Northwestern Lumberman.*

COMMON BOARDS—ROUGH.

	Dry.
Common boards, 12 in.	$15 50
10 and 20 ft	14 00
12, 14, 16 and 18 ft	13 50
Culls, all lengths	11 50
1½ and 1½ com	13 50

TIMBER AND DIMENSION—DRY.

Small timber, 18 ft. and under	$11 50
12, 14, 16 and 18 ft. joist	13 00
2x4, 10 and 20 ft	14 00
2x4, 18 ft	12 50
20 feet	13 50
22 feet	16 50
24 feet	16 50
26 feet	19 50
28 feet	19 50
30 feet	19 50
2 in. cull plank, all widths	8 00
2x4 culls, all lengths, green	8 00

ALBANY.

ALBANY, June 7.—Pine Lumber has been in free receipt, with a good trade during the past week, mainly to New York and Brooklyn ; from Brooklyn a number of buyers have, within the last few days, been in the District. A large sale, but of which we have not any particulars, is reported to have been made yesterday for Greenpoint. Prices are held with much firmness on a freely moving market. From the Saginaw and from Canada, active markets are reported at very firm prices ; indeed at all manufacturing points the markets are stiff and buyers are meeting manufacturers at their prices.

In Hardwoods there is a steady trade at quotations.

Coarse Lumber is moving as brisk as ever ; the receipts are coming in free and going out, on sales ahead, as fast as received ; prices are very firm.

The receipts by canal at Albany from the opening of navigation to June 1st were :—

	Boards and Scantling, ft.	*Shingles, M.*	*Timber, cub. ft.*	*Staves, lb.*
1881	20,708,000	48	.....	459,000
1880	49,982,000	100	.....	.....

River freights are :—

To New York, ₱ M ft	$ @1 00
To Bridgeport	@1 37½
To New Haven	@1,37½
To Providence, Fall River and Newport	2 00@2 25
To Pawtucket	2 25@2 50
To Norwalk	1 25@1 30
To Hartford	@2 00
To Norwich	@2 00
To Middletown	@1 75
To New London	@1 75
To Philadelphia	@2 00

Quotations at the yards are as follows :—

Pine, clear, ₱ M	$50 00@60 00
Pine, fourths	45 00@55 00
Pine, selects	40 00@50 00
Pine, good box	14 00@28 00
Pine, 10-in. plank, each	00 38@00 42
Pine, 10-in. plank, culls, each	00 20@00 22
Pine boards, 10-in	25 00@27 00
Pine, 10-in. boards, culls	17 00@18 00
Pine, 10-in. boards, 16 ft., ₱ M	25 00@30 00
Pine, 12-in. boards, 16 ft	25 00@30 00
Pine, 12-in. boards, 18 ft	26 00@28 00
Pine, 1¼ in. siding, select	38 00@40 00
Pine, 1¼-in. siding, common	15 00@18 00
Pine, 1-in. siding, select	38 00@40 00
Pine, inch siding, common	15 00@18 00
Spruce, boards, each	00 15@00 15
Spruce, plonk, 1¼-in., each	00 19@00 19
Spruce, plank, 2-in., each	00 28@00 28
Spruce, wall strips, each	00 11@00 12
Hemlock, boards, each	00 13@00 00
Hemlock, joist, 4x6, each	00 31@00 31
Hemlock, joist, 2½x4, each	00 13@00 13
Hemlock, wall strips, 2x4, each	00 10@00 10
Ash, good, ₱ M	38 00@45 00
Ash, second quality, ₱ M	25 00@30 00
Cherry, good, ₱ M	60 00@70 00
Cherry, common, ₱ M	25 00@35 00
Oak, good, ₱ M	38 00@43 00
Oak, second quality, ₱ M	20 00@25 00
Basswood, ₱ M	25 00@28 00
Hickory, ₱ M	36 00@40 00
Maple, Canada, ₱ M	26 00@30 00
Chestnut, ₱ M	35 00@40 00
Shingles, shaved, pine, ₱ M	6 00@00 00
" 2nd quality	4 50@00 00
" extra, sawed, pine	4 20@04 25
" clear, "	3 25@00 00
" cedar, mixed	3 00@00 00
" cedar, XXX	3 75@00 00
" hemlock	2 25@00 00
Lath, hemlock, ₱ M	1 50@00 00
Lath, spruce, "	1 75@00 00
Lath, pine, "	2 00@00 00

NEW YORK.

Our wholesale market has fallen into a sort of rut from which it is difficult to draw many new features of interest from week to week. Business continues good all around, supplies are generally selling close to the offering, especially for near-by delivery, and prices are well maintained for all attractive goods and assortments. In fact, it is a good, healthy and cheerful market, with no reason to expect the favorable elements will vanish for some time to come. Consumption is unabated, indeed for building, stock tends toward an increase. Dealers are on the look out for additions to assortment and the interest of exporters is retained to a very fair extent, though on some grades the foreign demand has been diverted to parcels at primary points. Choice well-seasoned stuff of all kinds is becoming somewhat scarce, and holders who have anything of the kind in stock talk rather firmer.

Spruce still appears to be under very good control and sellers' views comparatively extreme, especially on full sizes, of which there is a very small amount within reach. Logs are more plenty at the mills, but a goodly number of orders have been awaiting them and the additional product will not disturb the condition of the market. Agents have been unwilling to quote randoms positively in the absence of business of a fairly testing character, but on a general range to cover all grades about $14.00@16, may be named, while on specials the line may be extended up to $17.00, to cover all sizes and deliveries, but no higher than the latter figure is now mentioned.

Piling is plenty and dull with values fluctuating slightly, though about 4c. per foot seem to be the average rate. Exactly what has possessed producers to send forward the stock they have this spring it is difficult to determine, as some of the winter accumulation still remains unsold and is difficult to work out.

White Pine does not appear to have changed in any important particular since our last. The demand from home sources continues good and general, all regular descriptions and sizes being wanted, and the orders coming from pretty much every source ordinarily represented. Larger quantities and better assortments are becoming available, but the limit of valuation is full and deficiencies here cannot be replaced at any reduction on cost. Exporters move with some showing of caution, but are pretty good customers still with dealers who cater to the foreign outlet, confident that their business will hold good. We quote $17@19 per M for West India shipping boards ; $24.50@26 for South American do. ; $16@16.50 for box board ; $17@17.50 for do. wide and sound do.

Yellow Pine continues to be reported in the same strong and cheerful manner by pretty much the entire trade, but shows no positively new features. Supplies immediately available are small and poorly assorted, the principal mills have orders to keep them busy for many weeks to come, even on an uninterrupted run of saws, and new orders and specifications are daily coming to hand. Agents are also figuring on a pretty good run of orders for shipment direct from the South. Prices strong and inclined to an advance if anything. We quote random cargoes at about $24@26 per M. ; ordered cargoes, $26@28 do. ; green flooring boards, $24.50@26.50 do. ; and dry do. do., $27.00@29. Cargoes at the South, $15.00@19.00 per M. for rough, and $20.00@24.00 for dressed.

Hardwoods continue quite generally in sellers favor, the good control of the desirable stock at primary points and the apparent wants of jobbers and consumers inspires much confidence among holders. No further positive additions to value, however, have of late been noted and indeed at the prices asked some buyers are refusing to operate as "there is no money in it." We quote at wholesale rates by carload about as follows : Ash, $35@38 per M. ; oak, $40@45 do. ; maple, $30@35 do. ; chestnut, 1st and 2nd, $30@35 do. ; do. culls, $18@20 do. ; cherry, $50@55 do. ; white wood, ½ and ⅝ inch, $25@27.50, and do. inch, $33@35 do.

Shingles have been selling to about the ordinary extent and without change in tone or prices. We quote : Pine shipping stocks, $4 for 18-inch, and Eastern saw grades at $2.50@4.50 for 16-inch, as to quality and to quantity.

Machine dressed cedar shingles quoted as follows: For 30-inch, $16@22.25 for A and $28.75 @33.25 for No. 1; for 24-inch, $6.50@16 for A and $16.75@23 for No. 1; for 20-inch, $5@10.50 for A and $11.25@11.75 for No. 1.

At the yards business is good and general and dealers appear to be having a first-rate season as a rule. Some complain of competition compelling them to sell on a very narrow margin.—*Real Estate Record.*

TONAWANDA.

TONAWANDA, N.Y., May 30.—Receipts by lake continue to come in very generously and acceptably, giving the yards here an opportunity to stock up with stuff that is much needed to enable them to fill orders, some of which have been on the books three and four weeks. The amount of lumber received at this point during the past week will foot up about 16,500,000 feet; one consignment of shingles, 1,600,000. The ruling figure from Michigan points has been $3 per thousand on lumber. Dealers here are chafing somewhat under this steady high rate, and some of the prominent ones are yet holding off, as that price is too much of a discrimination against their interests as compared with through rates by rail. Canal freights to Albany have dropped a trifle since last report, and are quoted to-day at $2.50 to Albany, and $3.25 to New York. Boats are coming in freely, and there is an active demand for the season. Sales are reported as being good, with no change in prices. We hear of an order for 250,000 feet dressed for New England parties; 350,000 feet of box for an eastern firm at $12.50; 1,000,000 shingles at $3.65 here; 600,000 shingles, clear butts, $2.75; and other equally favorable transactions. With the present condition of the trade there can be little or no change in prices. We quote as follows:—

CARGO LOTS—MICHIGAN INSPECTION.

Three uppers	$38 00@43 00
Common	17 50@20 00
Culls	11 50@12 50

We quote railroad freights as follows:—

Tonawanda to Boston or New England points, per ton	$3 50
New York and Hudson river points	3 00
Jersey City, Newark, etc	3 00
Philadelphia, Baltimore, Wilmington, etc	3 00

BOSTON.

The *Journal of Commerce* of June the 4th says:—

The general appearance of the market is about the same as last week, and dealers report the demand as very good. Prices are firm, and will probably remain for some time as now quoted, unless hardwoods advance in sympathy with the western markets. Reports from the west show seasoned hardwoods to be very scarce, and in some cases the supply is so low as to be hardly equal to the demand. As a consequence, whitewoods have advanced $2@$5, and ash $2.50@$7. Oak has also advanced, both in timber and flooring. The eastern markets, as yet, remain unchanged, and this upward turn at the west will probably subside as soon as shipments from primary points begin to come in and stocks are replenished. Below are carload quotations.

CANADA PINE.

Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
do do 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

OSWEGO, N.Y.

Quotations are as follows:—

Three uppers	$42 00@45 00
Pickings	32 00@35 00
Fine, common	20 00@25 00
Common	14 00@16 00
Culls	12 00@14 00
Mill run lots	17 00@22 00
Sidings, selected, 1 inch	32 00@34 00
" 1½ inch	30 00@38 00
Mill run, 1x10, 13 to 16 ft	17 00@21 00
selected	20 00@25 00
shippers	15 00@16 00
Mill run, 1 and 1½ inch strips	16 00@20 00
Culls, selected	22 00@30 00
Culls	12 00@14 00
1x6 selected for clapboards	24 00@35 00
Shingles, XXX, 18 inch, pine	3 75@ 4 00
XXX, 18 inch, cedar	3 00@ 3 15
Lath	1 40@ 1 60

If you suffer from any chronic disease arising from Impure Blood, Sluggish Liver, disordered Kidneys or Inactivity of the Bowels; if your Nervous System is deteriorated from whatever cause arising, do not despair, but procure a trial bottle of Burdock Blood Bitters, it will only cost 10 cents. Large Bottles $1.00, for sale by all medicine dealers.

FREIGHTS.

OSWEGO.—Canal freights on lumber are $1.60 to Albany and $2.25 per M up to New York.

BUFFALO, N.Y.—Canal freights dull and rates unchanged. Quoted as follows:—Pine lumber at $2.25 per M feet to New York. Staves to New York $1.30 per ton over tolls.

EAST SAGINAW, Mich.—Lumber—Freights to Ohio ports steady, at $2.50 to $2.75, outside figure being Toledo rates. Buffalo and Tonawanda $3 to $3.25, outside figure being the rate to Tonawanda.

BAY CITY, Mich.—Lumber to Toledo $2.50, Tonawanda $3, Cleveland $3.

TORONTO.—Lumber is still taken at $1.25.

THE SLIDES.

The following is a statement of the timber which has passed the Chaudiere Slides during the week ending 3rd June:—

		Cribs.	*Pieces.*
May 23rd	J. R. Klock	74	1,910
" "	A. & P. White	206	5,327
" 25th	John Fraser	112	3,095
" 26th	Wm. Mackay	85	2,336
" 27th	Robt. Grant	56	1,574
" 28th	James Findlay	12	553
June 1st	Wm. Croft	35	886
" "	J. O. T. Havey	34	990
May 28th	James B. Dickson	102	2,570

Heat in the Boiler Room.

H. G. Baker in the *Lumber World* says:—Excessive heat in your boiler room, while indicating a waste of fuel, or, in other words, a loss of power, is by no means beneficial to your engineer or firemen, and it presence causes them, perhaps unwittingly, to become careless in the performance of their duties, this carelessness resulting more to your detriment than theirs. A man overheated is not capable of exerting his best energies in the performance of any labor, physical or mental, and when your fireman or engineer begin to get careless, they, as everyone else, get more and more so, particularly if the conditions under which they labor are not changed. Ventilation in the boiler room is permissible if due precautions are taken to prevent radiation from your boiler and steam pipes. If these are properly protected, comparatively little heat will pass from them into the room, and ventilation, so long as strong currents or draft of air are not created, will not be hurtful. If your boiler or connections are not properly protected, don't ventilate, but shut your room up as closely and tight as possible, and keep it so. Put a man inside and keep him there to attend to the engine and fire, and when he is sufficiently baked, take him out and substitute another, It wont be quite as cheap as it would to protect your steam surfaces, but you can do it.

Growth of Timber.

As the result of observation, and from the testimony of reliable men, the following is about the average growth in twelve years of the leading desirable varieties of timber, when planted in belts or groves and cultivated: White maple, one foot in diameter and 30 feet high; ash, leaf maple or box elder, one foot in diameter and 20 feet high; white willow, one and a half feet in diameter and 50 feet high; yellow willow, one and a half feet in diameter and 35 feet high; Lombardy poplar, 10 inches in diameter and 40 feet high; blue and white ash, 10 inches in diameter and 25 feet high; black walnut and butternut, 10 inches in diameter and 20 feet high.

Manitoba.

Prittie's sixth party with sleeping cars attached, will leave on 29th June, per G.T.R. at 11.45 a.m., and continue every other week during the season, preceded two days before by their fast freight train. 30,000 acres of choice land for sale. Letters enclose 3c. stamp for reply. R. W. PRITTIE & Co., 64 King Street East, Toronto. L16

With the Approach of Spring, Biliary Complaints prevail that often lead to serious results. Guard against their attack in time by using Burdock Blood Bitters: the best Liver Invigorator, Kidney Corrector, Regulator of the Bowels and Secretions, and the purest, most permanent Tonic in the world. For sale by all dealers.

Flexible Board Rules,

With Steel Head, either Cleveland or London make, at $1.75 Each.

GEORGE STETHEM,

PETERBOROUGH, L16

Wrought Iron Shanty Cook Stoves

The Best Article ever offered to the Trade.

I have much pleasure in drawing attention to my **WROUGHT IRON COOKING STOVE, for Shanty, Hotel and Boarding House use.** These Stoves are made of **Heavy Sheet Iron,** the top and lining of the fire-box being of **Heauy Cast Metal** and all the connecting parts of substantial **Wrought Iron Work.** The dimensions of these Stoves are as follows:

SINGLE OVEN STOVE

Top surface contains six 10-inch holes, with ample room between, and one oven 16 x 24 x 26.

DOUBLE OVEN STOVE

The Double Oven has a top surface containing twelve 10-inch pot holes, with two ovens, each 16 x 24 x 26. One fire-box of suitable size for area to be heated. Below will be found Testimonials from some of the leading Lumbermen, who have used my Wrought Iron Cook Stoves since I ommenced manufacturing them. They are the names of gentlemen who are well known and eliable, and will carry more weight than any recommendation of my own could do.

The Best Stove I have ever Used.

PETERBOROUGH, May 31, 1880.

ADAM HALL, Esq., Peterborough. Dear Sir,—I have used your Wrought Iron Cooking Stove in our lumbering operations since its introduction here, and have no hesitation in saying that I prefer it to any other. For durability, economy and efficiency, where a large number of men are employed, it is the best stove I have ever used. You can, with confidence, offer it to hotels, boarding houses and lumbermen.

Yours truly, THOS. GEO. HAZLITT.

The Stove for Lumbermen.

PETERBOROUGH, June 1st, 1880.

ADAM HALL, Esq., Peterborough. My Dear Sir,—We have used your Wrought Iron Cooking Stove and find it is very satisfactory for lumber operations, especially so on drives. We can recommend it highly.

Yours truly, IRWIN & BOYD,

Gives the Greatest Satisfaction.

PETERBOROUGH, June 3rd, 1880.

A. HALL, Peterborough. Dear Sir,—I have had the Wrought Iron Cook Stove, purchased from you, in constant use ever since last fall, and it gives the greatest satisfaction in every respect. I can recommend them highly to any one who is in the lumber business. Very truly yours, GEO. HILLIARD, M.P.

EVERY STOVE GUARANTEED

All the necessary TINWARE and CUTLERY for Shanties suppied at the Lowest Prices.

ADAM HALL, Peterborough.

HOW SPOOLS ARE MADE.

The town of Drummondsville, Canada, on the St. Francis river, had the good fortune some years ago to be selected as the site of several factories for the manufacture of spools, the principal reason for the selection being the abundance of white birch in the immediate vicinity. This wood, though inferior for many purposes, is just the thing for spools, and the following account of the process of manufacturing these useful articles may be of interest.

The wood, after being delivered to the factories is first sawn into pieces about 4 feet long and from 1 to 1¼ inches square, according to the spool it is desired to make. These pieces are put into a dry-house and thoroughly dried, from whence they are taken into the factory and given to the rougher, who, in an incredibly short space of time, bores a hole in the centre a couple of inches deep, turns about the same space round, and then cuts off the length required for a spool. The machines used for this purpose are revolving plainers, in the centre of which is a revolving gimlet or bit, and immediately to the right a small circular saw with a gauge set to the proper size for the spools. The rougers receive 1¼ cents per gross for their work, and experienced men turn out from 100 to 130 gross per day. The round blocks pass from them to the finishers, who place them in machines which give them the shape of spools, and make them quite smooth. The spools are thrown loosely into a large cylinder, which revolves slowly, so that the spools are polished by the constant rubbing upon each other for some time. On being taken out of the cylinder, they are placed in a hopper with an opening at the bottom, through which they pass down a slide for inspection. Here the inspector sits and watches closely to see that no imperfect spools are allowed to pass, and a very small knot or scratch is sufficient to condem them. They are packed in large boxes, made the proper size, and no additional packing is needed. The packers receive one-fourth of a cent per gross for packing, and a smart boy who is accustomed to the work can pack about 200 gross per day. One proprietor ships over two million spools per month to England, and another firm ships over one million spools to Glasgow, Scotland.

Mean Velocity in Open Water Courses.

The discharge of open water courses may be found experimentally by observing the velocity of the current, and measuring the cross-sectional area of the stream. But to do this correctly, we require the mean velocity throughout the section, which cannot be obtained by observation. The velocity varies, being a maximum at the surface, and where the channel is deepest, which is usually near the centre of the width, diminishing from thence to the banks on either side and to the bottom, where it is a minimum. The best experiments we have, give the mean velocity throughout the section at 84 per cent. of the maximum central surface velocity, which is usually the velocity observed, being easily obtained by a float on the surface of the stream. Thus, if a channel has, by observation, a central surface velocity of 35 feet per minute the mean velocity will be 29.4 feet.

A Creditable Organ.

The Lumber and Timber industries of Canada, probably the most important in the country, have at last, we are pleased to notice, secured an influential and highly creditable organ in THE CANADA LUMBERMAN, published by Messrs. Toker & Co., at Peterborough. The LUMBERMAN was founded in Toronto last year by Mr. Alex. Begg, and came into the hands of the present publishers only a month ago. It appears in an entirely new dress, and will in future be published semi-monthly, at $2.00 per annum. It has a vast field and important work before it, and under its present able management we hope to see it live and flourish. It certainly deserves the support of every one interested in the lumber trade, to which it cannot fail to be of immense benefit.—*North Hastings Review.*

Hagyard's Yellow Oil is a perfect panacea curing by external and internal use all inflammation, pain and soreness; Rheumatism, Stiff Joints, Deafness, Colds, Kidney complaints, Burns, Frost Bites, and Flesh Wounds of every variety. For sale by all dealers.

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JAMES D. McARTHUR - - - Manager.

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Pure Oak Tanned Leather Belting!

FIRE ENGINE HOSE, LACE, LEATHER,

OAK TANNED SOLE LEATHER, ETC., ETC.

STITCHED AND RIBBED BELTING MADE TO ORDER.

☞Double Always in Stock. Send for Samples and Prices☜

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The Crowning Triumph of the Bell Organ

The Bell Organs have just received the HIGHEST AWARD and SPECIAL PRIZE (Gold Medal) at the International Exhibition, Sydney, Australia, this year for their Organs over all the English and American makers. This along with the unlimited awards, prove that

THE BELL ORGANS LEAD THE WORLD!

WE RECEIVED

Medal and Diploma.....Provincial Exhibition, 1871
Medal and Diploma.....Centennial Exhibition, 1876
International Medal & Diploma, Sydney, Aus. 1877

WE RECEIVED

Only Medal for Parlor Organ, Provincial Ex., 1878
Only Medal for Parlor Organ, Industrial Ex., 1879
And Gold Medal.....at Sydney Australia, 1880

The Bell Organ Manufactory is the Largest and Oldest in the British Empire, and the fact that we have sold nearly 15,000 proves that they are the best in the market. ☞We guarantee all our Organs for five years. Correspondence invited. Illustrated Catalogue mailed free.

W. BELL & CO.

41 to 47 East Market Square, GUELPH, ONT.

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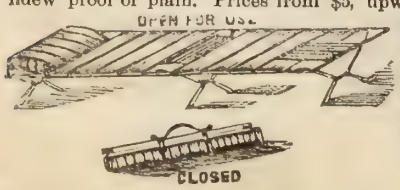
National Manufacturing Company

202 SPARKS STREET, OTTAWA.

anufacturers of Tents for Lumbermen, Sportsmen, Camp Meetings, Photographers, Lawn and ilitary Encampments, with or without extra roofs, all sizes and styles, white or fancy striped, ildew proof or plain. Prices from $5, upwards. Flags of all descriptions, (regulation sizes) made of the best of silk-finish bunting. CAMP BEDS (Bradley's Patent) the best bed ever invented; size when folded 2 x 6 in.; 3 feet long, weighing only 11 pounds, but strong enough to bear the weight of any man. Waterproof wagon and horse-covers, tarpaulins sheets, coats and leggings of every description made to order on the premises. ☞Special rates to Lumbermen. Send for catalogue and price list to



NATIONAL MANUFACTURING CO.,
202 Sparks Street, Ottawa

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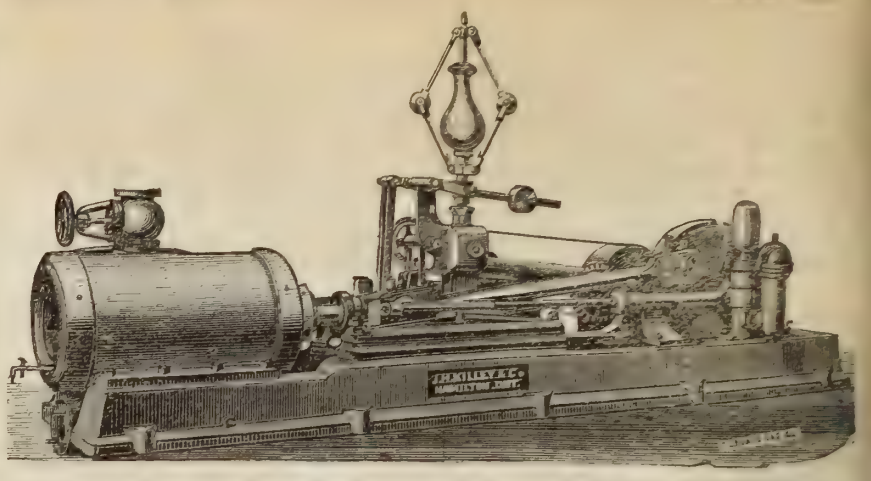

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Manufacturers of Economical, Variable, Cut-off, High Pressure, and

Condensing Engines

Patent Circulating and Self-Cleansing Boilers, Improved Feed Water Heaters and Patent Steam Blast Apparatus for Improving Draft and Economizing Fuel,

First-class Grist & Saw Mill Engines and Machinery

STEAM ROAD ROLLERS and STONE BREAKERS.

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Nos. 115, 117, 119, 121, King St. East, Toronto.

We are the most Extensive CLOTHIERS in Canada.

We carry a STOCK of FIFTY THOUSAND DOLLARS to choose from.

We watch the interest of our Customers. Our stock is FULL of the very best goods in Scotch, English and Canadian Tweeds.

We BUY and SELL for Cash, therefore it enables us to do business on very SMALL PROFITS.

NOTE THE PRICES.

We give a Good Tweed Suit for.....$6 00
We give a Good Tweed Pants for..... 1 50
We give a Good Overalls for 0 35

LUMBERMEN!

When you visit Toronto, come direct to OAK HALL, and fit yourselves out with a Good Suit. Remember the address:—OAK HALL, the Great One Price Clothing House, Toronto, opposite St. Jame's Cathedral.

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Lumber from BRYCE BROS. to Build the Canada Pacific Railway!

Office and Yard:
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TORONTO.

Planing Mill:
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Saw Mills:
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BLAKE—"It looks like good, clear stuff. It strikes me it is about the only clear thing in the whole business."

LUMBER MERCHANTS.

6L12

M. Covel's Latest Improved Automatic Saw Sharpener!

Is the Most Perfect Machine that has ever been Introduced into Mills for that purpose.

CIRCULAR SAW STEAM FEED!

I would also call special attention to my

Heavy Circular Saw Mills

and for STEAM MILLS, would recommend the Steam Feed, having put in several which are giving the best of satisfaction, as will be seen by the following testimonials:—

GRAVENHURST, August 20th, 1880.

WM. HAMILTON, ESQ., Peterborough.

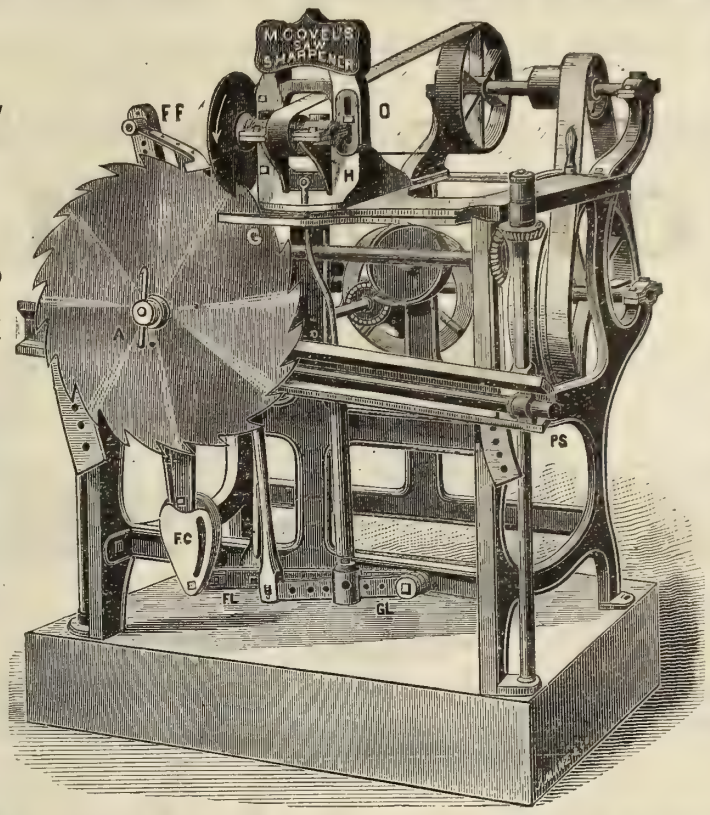
DEAR SIR—I have used your Steam Feed for near four months, and it has given me perfect satisfaction in every way; it is admitted by every person who has seen it work to be the best feed ever invented. Since I put it into my mill, I have not lost ten minutes time fixing anything belonging to it. I can cut 18 boards 13 ft. long in one minute. It can do much smoother and better work than the pinion feed. It is easily governed and reverses the carriages instantly. I am thoroughly satisfied with it and can recommend it to any person who has a Circular Saw Mill for cutting long or short logs. I consider I have cut more lumber than will pay for the Steam Feed since I got it than I would have cut had I not put it in.

Yours respectfully,
WILLIAM TAIT,
Lumberman, Gravenhurst.

TORONTO, August 11th, 1880.

WM. HAMILTON, Peterborough, Ont.

DEAR SIR—The Steam Feed you put in is working splendidly. Yours, &c.,
THOMPSON, SMITH & SON.

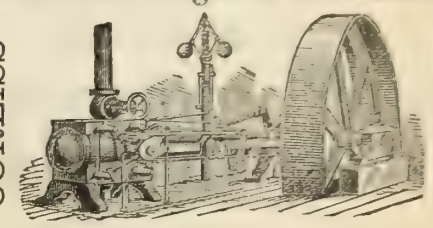


MILL MACHINERY!

I am also manufacturing Saw Mill Machinery, for all sizes of Gang or Circular Mills, Span or Double Circulars for Slabbing Small Logs. My Patent Jack Chain for drawing logs into Saw Mills, acknowledged by all to be the Cheapest and best ever got up; also, my Patent Lumber Markers, different sizes of Edgers, Gang Lath Mills, Trimmers, Power Gummers, and all Machinery used in a first class Gang or Circular Saw Mill; also, small Hand Gummers for use in the woods, for Cross-cut Saws. Rotary Pumps of different sizes, for Fire Protection in Mills, &c.

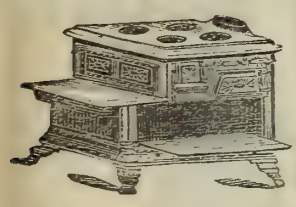
Horizontal Engines and Boilers

CORLISS ENGINES



Where economy of fuel is the great consideration, along with uniformity of speed, such as is required in Grist and Flouring Mills, Woollen and Cotton Factories, or large Factories of any kind, I supply the Corliss Engine. I feel justified in saying that our Style, Workmanship and Finish on this Engine will be no discredit to its renown, and certainly is not equalled in this country for economy of fuel. I have them working at 2½ pounds of coal per horse-power per hour. L10

WILLIAM HAMILTON - - PETERBOROUGH, ONT.



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EMERY and CORUNDUM WHEELS

THESE WHEELS ARE

WIRE STRENGTHENED!

AND SPECIALLY

Adapted for SAW GUMMING.

Neither Animal nor Vegetable Glue or Gum being used in the composition of these Wheels, they are NOT LIABLE TO HEAT, and give out no Odors, while they surpass all other Wheels for Free Cutting and Durability.

We refer to the following well-known Saw Manufacturers for opinions as to the quality of our Wheels:—Shirely & Dietrich, Galt; R. W. Smith & Co., St. Catharines; James Robertson, Montreal; James Robertson & Co., Toronto. We refer also to William Hamilton, Peterborough, Manufacturer of Covell Saw Sharpeners and to H. B. Rathbun & Son, Deseronto, Lumber Merchants. 1yL16

READ THIS!

Irish Canadian Office.
TORONTO, Feb. 21st, 1881.

MR. F. CRUMPTON,
Dear Sir,—The watch I purchased from you some time ago, has given perfect satisfaction, and I am much pleased with it, and can *cordially recommend* any person in need of a watch or anything in the jewelry line, to deal at your store. Yours very truly,
PATRICK BOYLE,
Proprietor *Irish Canadian*

Send for our new price list of Watches, Diamonds, Silverware, Jewellery, &c., sent post prepaid on application. Goods sent C. O. D. to any part of Canada. We have dozens of testimonials similar to the above, plainly showing that 83 King St. East is the place to buy your goods.

F. CRUMPTON,
83 King Street East,
TORONTO. b30

F. E. DIXON & CO.

MANUFACTURERS OF PURE BARK TANNED

LEATHER BELTING

First Prize, Provincial Exhibition	Ottawa, 1875
First Prize, Provincial Exhibition	Hamilton, 1876
First Prize, Provincial Exhibition	London, 1877
First Prize, Industrial Exhibition	Toronto, 1879
First Prize, Industrial Exhibition	Toronto, 1880
International Medal, Centennial Ex.	Philadelphia, 1876

None genuine unless with a STAR on the head of rivets. Send for Price Lists and Discounts.

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American Hotel, Corner Young & Front Sts.,

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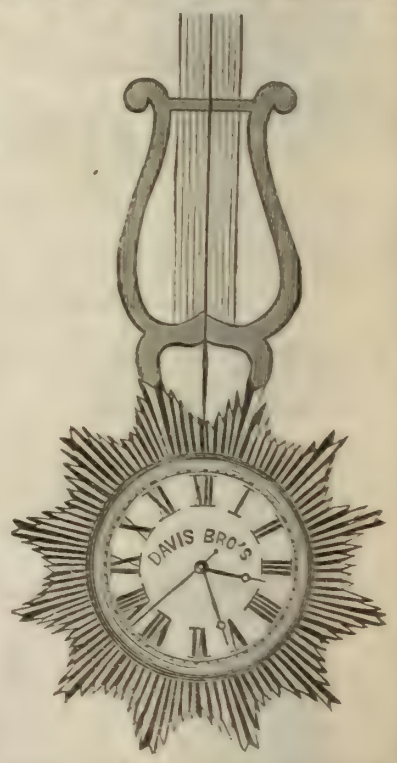
Newly and elegantly furnished throughout. Contains one hundred rooms, and under it the new management is first-class in all its appointments, at moderate rates.
Free omnibuses to and from all trains.

WM. MACKIE, of St. Lawrence Hall, Port Hope, and W. R. BINGHAM, of Bradford, Ontario, Proprietors b20

SUN CLOCK



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At a REASONABLE PRICE, call at

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130 Young Street, Toronto.

N.B.—Repairing Promply Attended to

LUMBERMEN'S STATIONERY.

We will supply anything in the line of BLANKS or STATIONERY for Lumber Shanties and Offices at City prices.

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Shanty Orders
Shanty Receipts
Shanty Time Books
Shanty Log Books
Shanty Reports
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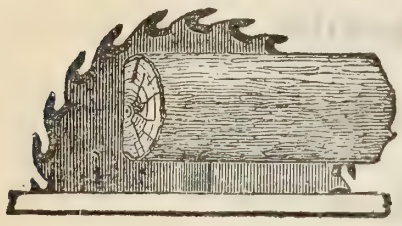

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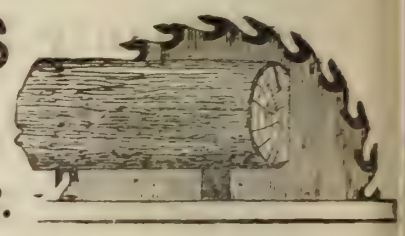

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EMERY WHEELS FOR SAW GUMMING!

Solid Emery Wheels are now almost in universal use for the purpose of gulletting and gumming saws. Statistics show from 25,000 to 30,000 saw-mills in the United States. Many of these run only a single saw each. A one-saw mill would use one or two wheels a year, costing $3 to $4 each, and when such small mills order single Emery Wheels from the factory, the express charges often equal the cost of the wheel. There was a time when the quality of Emery Wheels was so uncertain, and the demand so fickle, that storekeepers could not afford to carry them in stock. Now, however, Saw Gumming Wheels have become as staple an article as Files, and every dealer in saws, Hardware and Mill Supplies can afford to carry a few dozen standard sizes in stock. Large dealers order stocks of $500 to $750 worth at a time. Saw Gumming Wheels are used with the edge (or face) square, round, or beveled. Probably seven-eigths of all in use are beveled.

The principal sizes are:

8x¼, 8x⅜, 8x½ } ¾ in. hole. 10x¼, 10x⅜, 10x½, 10x⅝ } ¾ in. hole. 12x¼, 12x⅜, 12x½, 12x⅝, 12x¾, 12x⅞ } Holes, ¾, ⅞ and 1 inch.

Probably more wheels 12x⅜, 12x½ and 12x¾ are used than all the other sizes together. Saw Gumming Wheels are used, however, of all sizes up to 24x1½. The most frequent complaint is that Emery Wheels harden the saw so that a file won't touch it. The answer is that you don't want a file to touch it. An expert workman will shape and sharpen the teeth with an Emery Wheel, leaving the teeth *case hardened*, in which condition the saw will cut about 33⅓ per cent. more lumber than a soft saw will. Those who want to use the file, however, have only to touch the saw *lightly* a second time (after going all over it once), and this second touch will cut through the case-hardened scale.

A QUESTION OF QUALITY.

Thirteen years of experience as makers of, dealers in, and actual users of Emery Wheels, have led us to a decided opinion as to what quality is the best. We prefer for almost every use an "Extra Soft" wheel like the "Pocono." We believe that money lost through the rapid wear of the wheel is more than made up by the money saved on wages. As we cannot get every one to adopt our views, we make several qualities, so as to meet their views. We say to those who think they can only be satisfied with some other make of wheels (not Tanite), that we can furnish qualities *to match* any and every other make. If you have got used to some special quality of wheel, let us know what it is, and we can send you *a Tanite Wheel of similar quality*. Our *regular* classification of Saw Gumming Wheels is as follows:

CLASS 2. MEDIUM—HARD.—This Wheel is THE STANDARD Saw Gumming Wheel all over the world. Probably seven-eighths of all the Saw Gumming Wheels used are "Class 2." It cuts fast and keeps its shape well. Some think it too hard, some too soft. We prefer the "Pocono."

CLASS 3. MEDIUM—SOFT.—The same as to coarseness and fineness as "Class 2," but a *softer*, and therefor freer cutting wheel.

CLASS "POCONO." EXTRA SOFT.—This Wheel we prefer to all others. It is both *finer* in grain and softer than either of the above. As a Saw Gumming Wheel, Class "Pocono" is specially suited to those practical and experienced Sawyers who know how to grind with a light touch, and who want a free cutting wheel that will not create much heat.

Illustrated Circulars and Catalogue, showing Cuts of Saw Gumming Machines, and Shapes, Sizes and Prices of Wheels, sent free on application.

113

The Tanite Co. Stroudsburg, Monroe Co. Pennsylvania

CANADIAN TRADE SPECIALLY SOLICITED.

PUBLISHED SEMI-MONTHLY.

The only Newspaper devoted to the Lumber and Timber Industries published in Canada.

SUBSCRIPTION $2.00 PER ANNUM.

VOL. 1. **PETERBOROUGH, ONT., JULY 1, 1881.** **NO. 17.**

MESSRS. GILMOUR & CO. have settled with the Insurance Co., and set a gang of men at work rebuilding the mill. They have purchased a large lot of square timber from Mr. Buck to be used in the construction. They have placed a couple of gang saws and slab saws in the cedar mill, which is running night and day, turning out over eighty thousand feet in 24 hours.

GREAT preparations are being made at Rosseau to accommodate summer tourists. The Rosseau House is being repainted in first-class style. The proprietor of the Montreal House is making an addition to his house which will accommodate 150 guests. The work on the latter is being done under the supervision of Mr. M. Curtin, (formerly of Peterborough,) Mr. R. S. Macey, of Barrie, being the contractor, and Messrs. Kennedy and McVittie of the same place the architects. It is expected to be ready for the reception of guests by the 1st of July.

Sometime since the use of sawdust in mortar was recommended as superior even to hair for the prevention of cracking and falling off under the action of storms and frosts. A gentleman whose house is on the seashore, and necessarily exposed to long storms, says that mortar mixed with sawdust is the most durable he has ever used. The sawdust was first thoroughly dried and sifted through an ordinary grain sieve, to remove the larger particles. The mortar was made by mixing one part of cement, two of lime and two of sawdust with five of sand, the sawdust being first well mixed with the cement and sand.

A CURIOUS and interesting explanation of the absence of trees on the great western prairies was given at the meeting of the Academy of National Sciences by Mr. Thomas Meeham. Numberless theories have been advanced by the students in natural history why the great feeding grounds of the buffalo should be without such vegetation, the principle on which is supported by distinguished authors being that of climatic influences. Mr. Meeham's theory is that the absence of trees is due to artificial causes altogether. Taught by their necessities, the early Indians made it a practice annually to fire the high grass of the prairies, which had the effect of making the growth more luxuriant and consequently more inviting to the vast herds of buffalo, on which the aborigines depended chiefly for sustenance. It has been conclusively settled that no vegetation, save the hardy prairie grass, will appear on ground over which fire has swept, until another season, so that the yearly prairie fires extended the area of the plateau until they became almost measureless. Mr. Meeham cited several instances where trees have grown when the firing has been discontinued.

IF we may judge by our American exchanges, Lumbermen's Associations would seem to be the order of the day in all the lumbering districts on the other side of the line, and that every important district either has or soon will have its association. The object of these associations, is, of course, to secure the harmonious action of those operating in particular districts and on particulaar streams on matters common to them all. If they prove beneficial to the trade in the neighboring states, there would seem to be no reason why they should not prove equally beneficial to and worthy of the consideration of those engaged in the trade in Canada.

THE *Northwester Lumberman* gives an instance which brings into prominence the advantage of handling dry rather than green material. It gives as an instance of how one dealer made money while another lost, the following :—"Dry lath at Chicago prices, $3.25, with freight added, cost in a certain place $6.50 per thousand. They were sold at $6.60, leaving a margin to the man who bought at regular prices of only ten cents per thousand. The new competitor was not satisfied with this state of things, so he cast about for a more pleasant market to buy in and found it in Oshkosh. It is well known that, according to Chicago ideas of weights, dry lath weigh 500 pounds to the thousand pieces, and it was on this basis that the cost reached $6.50 in our western village. In Oshkosh, however, our close buyer found those who sold him the lath at $1.50, and guaranteed the weight to be only 400 pounds, which resulted to him in the neat little profit of $1.50 per thousand." Evidently the less water the manufacturer ships out of his yard the better for all concerned, unless it be for the railway companies who loose freight upon its transport.

AN Austrian inventor has lately brought out a new kind of wire belting, which is said to work very satisfactorily. The wire is wound on spindles, the diameter of which is as small as practicable, and is obtained, therefore, in the form of a long spiral spring. The main point to be observed in using these wire coils is to give them dimensions proportioned to the power to be transmitted, so that while flexible, they do not suffer undue elongation when in use. Practical trials have proved that the proper proportion between tenacity and elasticity of these coiled wire strings is obtained when the spindle, around which it has been wound, has a diameter equal to that of the wire. The two ends of a string or coil are hooked together, and each coil (the number varying according to the power transmitted) is laid in a groove on the pulleys. This method of transmission is reported to be cheap and effective. Another method of using wire for transmitting power has lately been patented by a man in Hartford, Conn. He makes a belt by weaving wire and cotton together to form a web, the warp being of wire and the weft of cotton. A double fabric is made, between which, or inside which, a number of single heavier wires are inclosed to take the tensile strain of the belt.

AT a meeting of the Chicago lumber dealers, held on the 11th June, it was decided by a vote of 24 ayes to 17 nays, to adhere to the existing price list until their next regular meeting to be held on the 27th June. The minority were in favor of an immediate advance, but the feeling of the majority seemed to be that before the list price was advanced they should cease cutting below it, as most of them had been doing, and it was stated that a strict adherence to the quotations of the existing list would be a *bona fide* advance of from fifty cents to a dollar per thousand all round. One thing is quite clear, that all attempts to break the Chicago market this spring have proved ineffectual, and that those who have attempted to do so by cutting prices are the only sufferers. The mill men are too strongly entrenched just now to be compelled to sell at any price the dealers choose to name, and as a consequence the latter have had to come to the terms of the former instead of the former to those of the latter. In fact the present state of stocks is all in favour of holding rather than of pushing sales owing to its wanting seasoning.

BUSINESS in the vicinity of Epping, N.H., according to a correspondent who writes from that point, continues remarkably good. The mills are in active operation, and are turning out large quanties of lumber. The supply of stock of last year's manufacture is entirely gone, and the mill men are shipping green and partly dry lumber to market to meet the demand, which is unusual for them to do. Prices are well sustained, and there is no immediate prospect of an unfavorable change in them. Hemlock for frames is scarce, and the Maine and northern New Hampshire mills are full of order for both hemlock and spruce timber. Large quantities of yellow pine timber is used in that and other parts of New England, especially for bridges and large buildings, to which purposes it is especially adapted.

IN repairing old boilers the mistake is often made of using for the patch thicker metal than that of which the boiler is made. A moment's reflection ought to show the absurdity of putting a five-sixteenths or three-eighths patch on an old one-quarter inch boiler shell ; yet it is not so rare an occurrence as one would imagine. A piece of new iron three-sixteenths of an inch thick, will, in most cases, be found stronger than a portion of a one-quarter inch old plate needing repairs.

HOW THINGS LOOK OUT WEST.

One of the *attaches* of the *Real Estate Record* has just returned from a flying visit to the West. In view of the interest which attaches to the crop question, a statement of what he saw and heard may be of some value to those who have interests in the stock and grain markets. Winter wheat is undoubtedly very seriously damaged in Ohio, Indiana, Illinois, Michigan and probably further West. At the best it cannot be more than a two-thirds crop. There is time enough for it to turn out somewhat better than the present promise, but heavy western grain men fear the worst and are bulls on the price of winter wheat.

The spring wheat crop, so far, looks fairly well. It promises an average yield, and the weather lately has been highly favorable. The return per acre will be about equal to last year. Still, it is too early to speak with any certainty about spring wheat. In view of the exceptional weather we are having all this year, the worst is to be feared.

The corn crop has been delayed in its planting several weeks and in many cases had to be replanted. The acreage will be large, but if we have a cool, wet summer, the crop will fall far behind that of last year.

All through the West it was noticeable that business activity was very great. There is a building mania under way, and in every city and town the number of new buildings is something extraordinary. All the railways seem to have as much traffic as they can handle. There was, however, cutting of rates on east bound passenger fares and freight. At any of the hotels, tickets from Chicago to New York could be bought for $15. There is a great deal of stock operating in the New York market on the part of operators in the Western cities. Just at present the Western operators are bulls on grain and bears on railway stocks. A great part of the immense short interest in Wall street is on Western orders. It is Europe and the East that are buying, the West is selling stocks.

Money is very abundant all through the West. At Rockford, Illinois, where only five years since money loaned at 8 and 10 per cent., now the banks find great difficulty in getting 6. At Newark, Ohio, farmers were reluctant to pay more than 5 per cent. for mortgages. In fact, there was a plethora of money everywhere. There was an expectation of an advance in prices, labor was increasing its demands, and hence all materials involving labor, are regarded cheap at present figures. The expectation was that the coming fall months would show a boom in merchandise and other commodities, including land and grain.—*New York Real Estate Record.*

Yellow Oil is *par excellence* the remedy for Pain, Lameness, Rheumatism, Croup, Deafness, Burns, Frost Bites, Stiff Joints, and all flesh wounds. Any medicine dealer can furhish it.

NOTES BY THE WAY.

MIDLAND.

The well equipped saw mills of the British Canadian Timber and Lumber Co., Messrs. Chew Bros., and J. M. Dollar, make Midland City a hive of industry during the summer season. The B.C.T. & L. Co. employ 120 men at their mills. The "cut" per day runs as high as 115,000 feet, and the season's work is expected to reach over 17 million feet. On Wednesday the 22nd inst., the burners and fixtures for the Brush electric light arrived at the mills. The engine to furnish the motive power for this new light has been in its place for some time, and in a few days the mills and yard will be lighted up, so that work can be carried on, sawing, piling, etc., by night as well as day.

At Wye River the B. C. T. & L. Co. have another mill, which saws on an average 40,000 per day. The season's cut is estimated at six million feet. The Company's powerful tug is kept constantly employed in towing.

The above mills, in connection with those of Messrs. Chew Bros. and J. M. Dollar, are immense feeders to the Midland Railway, which is taxed to its utmost capacity in transporting to Port Hope the millions of feet of lumber, shingles and lath thus so largely manufactured. The Midland Railway Company, however, are doing their part admirably, and their efforts are appreciated by manufacturers and shippers. The track is put in good order—in fact the Midland Railway, judging from outside appearances, is one of the best conducted and best paying railways in Canada.

A large and substantial wharf is also in course of construction by the Railway Company at Midland, which, when completed, will give that port facilities for shipping equal to any place on the Georgian Bay. To meet the prospective requirements of the trade, the Company are also erecting a mammoth elevator which will have a capacity of 250,000 feet, which is fully double of either the elevator at Port Hope or Collingwood. Its dimensions are 105 feet long 60 feet wide—height 110 feet. The tower is to be 22×23 feet, and 135 feet high. It is expected that grain will be brought from this point to Toronto next winter. or as soon as the gauge of the Toronto & Nipissing Railway is widened. As one of the principal ports on the Georgian Bay, with the best eastern outlet, a Custom House is required to facilitate the transaction of business. This is evident from the fact that the burners and other machinery for the electric light, already referred to, had to be sent from Woodville junction to the Custom House at Lindsay to be entered. Grain and other imports will require the attendance of an officer of Customs.

Mr. James Crossen is getting out a large quantity of oak and ash on the Georgian Bay for his car-works at Cobourg. Tanner's mill supplied him with 300,000 feet. The fire which occurred at Mr. Crossen's establishment recently, has necessitated an extra supply to meet the demand of his largely increasing trade. Passenger cars, as well as freight cars, of his manufacture are largely in use on the Grand Junction, the Midland and Credit Valley railways, In point of workmanship and comfort the passenger coaches are equal to those found on any of the other railway lines. A very great improvement is noticeable in the conductors' new vans on the Midland. They are furnished with cushioned seats, wardrobe, desk, and rack for conductor's papers, and at the same time are very comfortable for passengers.

PENETANGUISHENE.

Mr. McGibbon is getting out oak for Mr. Crossen at the rate of from 9 to 10 car loads per week. Mr. Christie is also furnishing dimension stuff from his mill at Sturgeon Bay, for the Cobourg car-works.

The Keene Lumber Co., Mr. Crossfield, manager, have erected a new mill on the bay. For piling grounds, sites for dwelling houses for workmen, etc., they have cleared twelve acres of the primitive forest. Seven dwellings and a store have been erected and nicely painted. The capacity of the mill is about 8 million feet. This season's cut will be 3½ million. The castings and machinery are from Craig & Cameron, Penetanguishene. A pan for evaporating maple sap and converting it into sugar is made by this firm. The pan will evaporate 450 lbs. of sugar at one boiling, and is something worthy of notice, being entirely unique in this northern part of Canada.

C. Beck & Co., who had their mill destroyed by fire last year, have erected a new mill—capacity 75 to 80,000 feet per day. The stock for this season will produce seven million feet. The mill is furnished with a circular and gang saws, with steam feed, the only arrangement of the sort north of Bradford mills.

GALT.

Another industry is to be added to those of this busy manufacturing town. Messrs. Beck & Co. are removing their cigar-box works from Baden to Galt, it being better provided with shipping facilities. The factory will be in a building erected by Geo. Hespeler, Esq., attached to his saw mill, which will furnish the driving power. Messrs. Beck & Co. will employ 20 hands. They use Spanish cedar and soft elm for the manufacture of the boxes.

Messrs. Cant & Gourlay have commenced the manufacture of the latest improved bicyle; and one of their workmen has underway, a tricycle which will be propelled by combined spring and lever, aided by the rider, who will sit comfortably between the two front wheels, as shown in an engraving in a recent number of the *Scientific American*.

BURK'S FALLS.

Mr. A. C. Manzer is erecting a steam saw mill at Burk's Falls, on the Maganetawan River. It is intended for local purposes. This part of the country is settling up rapidly.

A considerable quantity of logs belonging to the Maganetawan Lumber Co. is reported as "stuck" at Burk's Falls.

COBOCONK.

Coboconk is the northern terminus of the Toronto and Nipissing Railway, 88 miles from Toronto, situate on Gull River. It has a population of about 300, and is rendered famous as being the site of the celebrated Coboconk University, established there in 1874 by Professor Jimuel Briggs, D.B. The original University was destroyed last year by fire. Another building has been erected on the same foundation, named the "Coboconk University," a large hotel, having its rooms graduated according to the acquirements and requirements of the graduates, who are properly classified and attended to by the proprietor, Professor W. J. Chirpaw. Coboconk is also a place of importance from a lumbering point of view. There is a large steam saw mill near the railway station, in which the Dominion Bank has an interest, and which is managed by Mr. Jos. E. Gould. The mill has shipped this season over half a million feet of lumber, principally to Messrs, Christie, Kerr & Co., lumber dealers, Toronto, (Mr. Bond, inspector). The season's cut will amount to about 1,200,000 feet pine and 800,000 feet basswood. Lath is also manufactured at the mill, and a large trade is carried on by several parties in railway ties, telegraph poles, fence posts and cordwood—of the latter commodity about 2,000 cords are on hand awaiting shipment.

Logs and square timber in large quanties pass through the slide at Coboconk. This slide is fitted up with stop-logs, and, althongh put in its present state of good repair by the government, is free of tolls. It has a fall of about 15 feet, which furnishes an excellent water power, on which is a grist mill owned by Mr. McArthur, of Fenelon Falls. On the opposite side of the river from the grist mill stands an old wooden saw mill, which has not been in working order for several years. The advance party of a large drive belonging to the Dickson Estate, T. G. Hazlitt, manager, Peterborough, arrived at the slide about noon on the 20th inst. The party occupied three cribs—one for the accommodation of a span of horses, waggon, hay, &c.; another for the sleeping apartment of the gang, and the third for the cook, with kitchen, dining room and his paraphernalia of stove, flour, pork, tea, molasses, &c. After dinner the cribs were moored above the slide, and the work of dismantling at once commenced. Jehu, the driver, hitched up his sleek and tractable team of grey mares, and drove the waggon off the crib, over some immense boulders, across a short portage to the place of destination below the bridge. The stable and other buildings being constructed in sections, were taken down rapidly and placed in position for running the slide. The whole had to be scattered pretty well over the surface of the cribs to permit going under the bridge, which is a low shaky affair, and will soon tumble down if not repaired. All ready on the cribs, the stop-logs are raised, the boom timber runs down, and all pass over safely—the cook last but not least—amid the cheers of a large number of Coboconkers, who assembled on the bank of the river to witness the successful feat. The cribs are again moored. The work of reconstruction begins. Jehu ships his "greys" into their floating table, and the cook is at work preparing supper. The system is so complete that the whole is again in place before tea time.

The steamer *Coboconk*, which plies between Coboconk and Fenelon Falls, carrying passengers and towing, arrived during the afternoon with a cargo of ties, and returned the same evening to Fenelon Falls. The scenery along the water is delightful, and is taken advantage of by a large number of tourists from Toronto and elsewhere.

THE GEORGIAN BAY.

About four and a half million feet of logs taken out by J. Cockburn, on the Upper Maganetawan, for the Magnetawan Lumber Co., is reported "stuck" and abandoned for the season at Burk's Falls.

Six million feet belonging to the Ontario Bank is reported "hung up" on the North and South Seguin rivers. The men are still at work but have not made much progress for the past ten days.

The Georgian Bay Lumber Company are reported to have nearly three million feet yet to come down on several small streams in Muskoka.

Cook Bros. have 2,000 pieces board pine and 7,000 logs stuck on the Little East river, near Huntsville.

Thompson, Smith & Son are said to have a very large quantity "hung up" on Black River, and the Dominion Bank is also said to be in trouble with a large drive on the same stream.

Mr. M. McDougall, of Parry Harbor, recently sold a limit of 22 miles in Monteith, on the South Seguin, to J. C. Miller, of Parry Sound, for $6,250.

The Parry Sound Lumber Co. have shipped over seven million feet of pine lumber since the opening of navigation; about one-half of which was sold in Canada and the other in the United States.

The demand for coarse lumber this spring has exceeded anything known in the history of the trade. It is now difficult to find mill culls unsold, dry or green. Shingles and lath also scarce and in good demand. Prices firm on Georgian Bay.

THE business of hauling logs by rail from points in Clare county to Saginaw river points and Flint, is rapidly increasing. For the first five months of 1881 there was hauled a total of 68,053,260 feet. The total amount hauled by this road for the first five months of 1880, was 32,506,935 feet. It will be observed by these figures that the business this year, thus far, has more than doubled that of 1880 for a corresponding period.

SOME BIG CUTS.

The Mississippi Valley *Lumberman* says:—The daily cut of the mills at Wausau is as follows according to the Central:—

J. & A. Stewart & Co's mill, day and night:

Lumber, feet	2,000,000
Shingles	1,200,000
Lath	52,000
Pickets	75,000

B. G. Plummer's mill:

Lumber, feet	40,000
Shingles	70,000
Lath	18,000
Pickets	6,000

Clark, Johnson & Co's mill, daily:

Lumber, feet	800,000
Shingles	500,000
Lath	75,000
Pickets	5,000

J. C. Clarke's mill, daily:

Lumber, feet	1,700,000
Shingles	1,500,000
Lath	254,000
Pickets	42,000

Wausau Lumber Co's mill, daily:

Lumber, feet	1,300,000
Lath	200,000
Pickets	30,000

MR. GEORGE BRETT, a prominent lumberman of Whithall, N.Y., died on the 22nd ultimo.

IT is proposed to start a wood-pulp factory at Ottawa, and to put to use the sawdust that now goes to waste.

ON the 22nd of June the steam saw mills of Alexander Thompson, situated at Ettrick, London township, were burnt. The loss is about $4,000; insurance, 1,000.

THE *Country Gentleman* gives a statement showing that 35,435 lbs. of sugar was made last spring from 13,145 maple trees, which all stood within one mile of Lyndon Hill schoolhouse, Vt., by 18 persons. This was equal to an average yield of 29-13 pounds per tree.

ABOUT 12 o'clock on the night of the 24th ult., the saw mill in the village of Stayner, owned by Jones Bros. & Mackenzie, of Toronto, and occupied by Henry Allen, was discovered to be on fire. The fire brigade turned out promptly, but although they were furnished with a liberal supply of water, and in spite of the most strenuous exertion, the whole building, with a large quantity of lumber, shingles, and laths, was totally destroyed, throwing a number of hands out of work. Fortunately the night was calm, and the fire was prevented from spreading to the adjoining buildings. It is understood that there is no insurance on either buildings or contents. The cause of the fire is unknown.

THE *Brick, Tile and Metal Review*, of Pittsburgh, says: An immense quantity of lumber lies in the Allegheny river, in the vicinity of Herr's Island and below that point. Millions of feet of the finest pine logs ever felled have come down the Allegheny on the bosom of the present generous flood of water' and more are on the way. While most of the pine is in the form of logs, there is also a vast amount of lumber and shingles. It is said that the number of lumbermen who came down this spring is much larger than the several seasons past, while the amount of timber is also greater. Things are, therefore, lively in the boom on the upper Allegheny, and from the appearance of affairs our mill men and those below will have as much lumber as they want and at satisfactory prices.

COMPARATIVE TABLE.

SHOWING STOCK OF TIMBER AND DEALS IN LIVERPOOL ON MAY 31ST, 1880 AND 1881, AND ALSO THE CONSUMPTION FOR THE MONTH OF MAY, 1880 AND 1881.

	Stock, May 31st, 1881.	*Stock, May 31st, 1880.*	*Consumption for the month of May, 1881.*	*Consumption for the month of May, 1880.*
Quebec Square Pine	536,000 ft.	248,000 ft.	107,000 ft.	83,000 ft.
" Waney Board	186,000 "	87,000 "		
St. John Pine	5,000 "	42,000 "	3,000 "	30,000 "
Other Ports Pine	48,000 "	12,000 "	8,000 "	— "
Pitch Pine, hewn	569,000 "	489,000 "	214,000 "	278,000 "
" sawn	340,000 "	265,000 "	197,000 "	135,000 "
" planks	97,000 "	31,000 "	49,000 "	30,000 "
Red Pine	32,000 "	— "	2,000 "	10,000 "
Dantzig, &c., Fir	176,000 "	279,000 "	51,000 "	110,000 "
Sweden and Norway Fir	9,000 "	3,000 "	— "	1,500 "
Oak, Canadian	366,000 "	267,000 "	34,000 "	28,000 "
" Waggon scantling	147,000 "	— "	26,000 "	—
" Baltic	92,000 "	7,000 "	9,000 "	—
Elm	27,000 "	21,000 "	5,000 "	5,000 "
Ash	4,000 "	1,000 "	— "	—
Birch	102,000 "	66,000 "	44,000 "	62,000 "
Greenheart	56,000 "	97,000 "	8,000 "	15,000 "
East India Teak	8,000 "	31,000 "	11,000 "	6,000 "
Quebec Pine Deals	7,361 stds.	1,469 stds.	1,181 stds.	1,084 stds.
" Spruce Deals				
N.B. & N.S. Spruce Deals	13,680 "	12,191 "	6,309 "	4,910 "
" Pine "	1,030 "	1,381 "		
Baltic Deals	5,030 "	2,183 "	474 "	834 "
" Boards	400 "	763 "	61 "	127 "
" Flooring Boards	3,760 "	3,014 "	1,068 "	652 "

Wanted.

A SECOND HAND DOUBLE EDGER; also a LATH MACHINE, both in good repair. Reply stating lowest cash terms or particulars to Box 1002, Peterborough. L10

For Sale.

A 40 INCH LEFFELL WHEEL and COMPLETE CIRCULAR RIG, all in good order, suitable for a fifteen foot head. Apply to Box 1002, Peterborough. L10

Allandale Junction Hotel

Travellers by Northern Railway have 15 to 20 minutes by all trains, for refreshments. Solid meals. Tea and coffee at counter. Fine brands of Liquors and choice Cigars. b17 E. S. MEEKING, Proprietor.

Orillia House,

ORILLIA.

New and Commodious Brick Building; best north o Toronto; splendid sample rooms; centrally located; free 'bus. b20 JOHN KELLY, Proprietor.

The Queen's Hotel,

TORONTO, CANADA.

McGAW & WINNETT, Proprietors. Patronized by Royalty and the best families. Prices graduated according to room. b20

St. Lawrence Hall,

PORT HOPE.

Is noted for its superior home-like comforts—a well kept table, equalling the best hotels in Toronto, and large, well-furnished rooms. Good sample rooms on ground flour. Walton Street, Port Hope.
b26 WM. MACKIE, Proprietor.

Caledonian Hotel,

GRAVENHURST.

JOHN SHARPE, Proprietor. This Hotel has been newly opened out, pleasantly situated on Main Street, within five minutes walk of Northern Railway station. Bar kept with best assorted Wines, Liquors and Cigars. Every attention paid to guests. Good Stabling. 1yL15

St. Louis Hotel.

THE RUSSELL HOTEL CO., Proprietors.
WILLIS RUSSELL, Pres., Quebec.

This hotel, which is unrivalled for size, style and locality in Quebec, is open throughout the year for pleasure and business travel. b18

Queen's Hotel,

BRACEBRIDGE.

JOHN HIGGINS, Proprietor. The proprietor (late of Georgetown,) having lately purchased the above hotel,) will endeavor to make it one of the best houses in the District of Muskoka. Tourists and hunting parties will receive every possible attention. Free 'bus to and from steamboat wharf. Terms, $1 per day. b20

The American Hotel,

BARRIE, ONT.

Collier Street, Adjoining the Market.

RATES REASONABLE, CENTRAL LOCATION, FREE BUS TO AND FROM ALL TRAINS.

☞ Every accommodation for Commercial and LUMBERMEN.
L14 W. D. McDONALD, Proprietor.

Fraser's Hotel,

GRAVENHURST, ONT.

HENRY FRASER, proprietor, (successor to Dougland Brown.) Mr. Fraser having purchased and thoroughly renovated and refitted that old established hotel, so long and popularly kept and owned by Dougland Brown, in the Village of Gravenhurst, is now in a position to attend to the wants of the travelling and general public. Parties *en route* to the Muskoka District, will find "Fraser's" a comfortable stopping place. The Bar and Larder are well furnished. Convenient Sample Rooms for Commercial Men. Good stabling and attentive hostler. Free 'bus to and from trains and steamboats. b26

A BARGAIN—GRIST AND SAW MILL FOR SALE, paying 12 per cent. clear; price $9,000; and above percentage guaranteed. Apply to

JOSEPH DAVIES & Co.,
Lumber, Coal, & Commission Merchants,
46 CHURCH ST. TORONTO. 1yL16

D. S. BRIGGS,

9 TORONTO STREET, TORONTO.

WHOLESALE DEALER IN

Clear, Pickings, Common and Hardwood Lumber, Lath, Shingles, &c.

BILL STUFF CUT TO ORDER.
L12-1y

E. S. VINDIN,

Commission, Shipping, Forwarding and General Agent.

LUMBER MERCHANT

Office, Tempest's Block, Port Hope. L11

J. G. EDWARDS

HARDWARE MERCHANT,

LINDSAY.

BELTING, FILES, BABBIT METAL, CHAINS, ROPE, and
1y L17
LUMBERING SUPPLIES.

SAMUEL WINDRIM,

MANUFACTURER OF

Agricultural Implements, Etc

MILLBROOK, ONTARIO.

HAVING DISPENSED WITH THE SERVICES OF AGENTS, I take this opportunity to bring to the notice of intending purchasers of Reaping Machines, that I have now on hand a quantity of the Celebrated

HANLAN REAPER,

which has NEVER BEEN BEATEN YET, and am prepared to allow the Agents commission—FIFTEEN PER CENT—on all purchases. L17tf

Flexible Board Rules,

With Steel Head, either Cleveland or London make, at $1.75 Each.

GEORGE STETHEM,
PETERBOROUGH, L16

J. K. POST & CO.

LUMBER MERCHANTS
And Shipping Agents.
OSWEGO, N. Y.
L12-1y

JAMES HADDEN,

MANUFACTURER OF

Shingles and Dressed Stuff.

Foxmead, P. O., County of Simcoe, Ont.

Two Planers for sale or exchange for a Boiler. b26

CANOES!

The undersigned keeps Canoes suitable for LUMBERMEN, SPORTSMEN and others constantly on hand. Price List on application.

WILLIAM ENGLISH
8L14 **PETERBOROUGH, ONT.**

To Lumbermen.

The Subscriber makes to order all kinds of

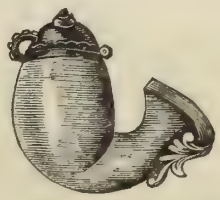
TENTS,

Hammocks, Tarpaulins, Waggon and Horse Covers,

☞ **Also dealer in all kinds of OIL SKIN Clothing, Nets and Seine Twines.**

An is also Agent for the best makes of AMERICAN COTTON DUCKS in all widths.

J. LECKIE,
6L12 46 Front Street E., TORONTO.



CHAS. M. LARSEN,

Manufacturer of all kinds of Lacquered and Enamelled Woodwork, Turning and Carving in

WOOD, HORN AND IVORY.

BILLIARD BALLS

Turned and coloured a speciality.

☞ MEERCHAUM and AMBER GOODS repaired in first-class style. b17

77½ King St. West, Toronto, Ont.

Northey's Steam Pump Works

BOILER FEED PUMPS,
AIR AND CIRCULATING PUMPS,
STEAM FIRE PUMPS, and
WRECKING PUMPS.

MINING PUMPS,
PUMPS SPECIALLY ADAPTED for OIL PIPE LINES,
And CITY WATER WORKS.

No. 47 King William Street.

HAMILTON, ONTARIO.

SEND FOR CIRCULAR. L17-1y

Wrought Iron Shanty Cook Stoves

The Best Article ever offered to the Trade.

I have much pleasure in drawing attention to my **WROUGHT IRON COOKING STOVE, for Shanty, Hotel and Boarding House use.** These Stoves are made of **Heavy Sheet Iron,** the top and lining of the fire-box being of **Heauy Cast Metal** and all the connecting parts of substantial **Wrought Iron Work.** The dimensions of these Stoves are as follows:—

SINGLE OVEN STOVE

Top surface contains six 10-inch holes, with ample room between, and one oven 16 x 24 x 26.

DOUBLE OVEN STOVE

The Double Oven has a top surface containing twelve 10-inch pot holes, with two ovens, each 16 x 24 x 26. One fire-box of suitable size for area to be heated. Below will be found Testimonials from some of the leading Lumbermen, who have used my Wrought Iron Cook Stoves since I ommenced manufacturing them. They are the names of gentlemen who are well known and eliable, and will carry more weight than any recommendation of my own could do.

The Best Stove I have ever Used.

PETERBOROUGH, May 31, 1880.

ADAM HALL, Esq., Peterborough. Dear Sir,—I have used your Wrought Iron Cooking Stove in our lumbering operations since its introduction here, and have no hesitation in saying that I prefer it to any other. For durability, economy and efficiency, where a large number of men are employed, it is the best stove I have ever used. You can, with confidence, offer it to hotels, boarding houses and lumbermen.

Yours truly, THOS. GEO. HAZLITT.

The Stove for Lumbermen.

PETERBOROUGH, June 1st, 1880.

ADAM HALL, Esq., Peterborough. My Dear Sir,—We have used your Wrought Iron Cooking Stove and find it is very satisfactory for lumber operations, especially so on drives. We can recommend it highly.

Yours truly, IRWIN & BOYD,

Gives the Greatest Satisfaction.

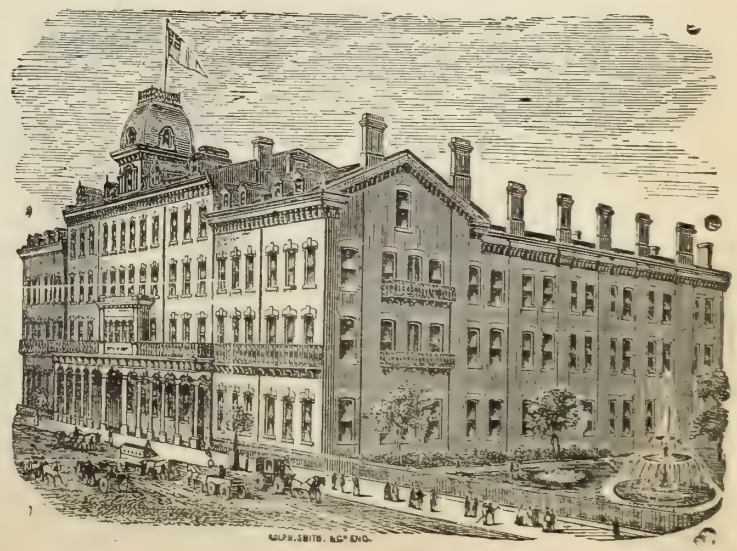
PETERBOROUGH, June 3rd, 1880.

A. HALL, Peterborough. Dear Sir,—I have had the Wrought Iron Cook Stove, purchased from you, in constant use ever since last fall, and it gives the greatest satisfaction in every respect. I can recommend them highly to any one who is in the lumber business. Very truly yours, GEO. HILLIARD, M.P.

EVERY STOVE GUARANTEED

All the necessary TINWARE and CUTLERY for Shanties suppied at the Lowest Prices.

ADAM HALL, Peterborough.



The QUEEN'S HOTEL, TORONTO, CANADA

McGAW & WINNETT, Proprietors.

☞ Patronized by Royalty and the best families. Prices graduated according to rooms. b17

THE DEMAND AND THE SUPPLY.

The question of how much lumber will be called for during a season, and how much will be forthcoming to meet this want, is always an interesting one to those engaged in manufacturing or selling this article. They spend as much of their time and thought in considering it as they venture to lay upon any other one thing connected with their business, and with a result that in most cases is probably as little satisfactory as any that attends their efforts. It is very rare that an adequate solution of the problem is reached in advance; it is even doubtful whether any is often possible. Operators may scan the horizon of their trade with the greatest care for indications, may figure up the visible stock of logs and lumber, may estimate as closely as it can be done, the probable or possible increase in consumption over what it was in former years,—they may take all these things into consideration most carefully, but when they have done so they are generally obliged to acknowledge themselves unable to reach any certain conclusions in regard to the quality they will have to sell, or the amount they will be able to dispose of to their customers. Both the demand for lumber and the supply of it depend largely upon circumstances concering which much more is known at the end of the season than at the beginning. The failure of the crops, the hanging up of the drives, or many other occurrences that cannot be foreseen, are liable to affect one or the other materially, and sometimes make all the difference between a busy and profitable season, and an inactive and unprofitable one. Any conclusions in regard to the probable demand or the probable supply, that are drawn from a study of the outlook, as it appears on either hand, must possess, therefore, to a certain degree, the nature and value of speculations are valuable, if not always absolutely accurate. They show what may reasonably be looked forward to, provided certain conditions exist, and, hence, afford some data from which an idea may be obtained within certain limits, as to what lumber, may be, or should be, worth.

Inquiry in regard to what the demand for lumber is likely to be in the immediate future comes at once upon certain facts in the present situation of the trade that are too important to be overlooked. We find that the sale of lumber at all principal points of distribution is larger than it ever has been at this time in the season; that country yards, as a rule, are buying freely, and that they are selling their stock more rapidly than usual; that in all parts of the country there is a remarkable activity in building operations; that preparations are making to carry out railway enterprises that were abandoned when the hard times began a few years ago, and have since laid dormant; that, in fact, everywhere the lumber trade and other lines of business intimately connected with it are in such shape as they have not been in before in many years. We find another thing. The immigration to the United States from other countries has been, and according to reliable reports will be, large beyond all precedent. Every vessel that reaches our shores from the opposite side of the Atlantic brings as many new settlers as she can carry, and it is well known that all the steamship accommodations for such passengers have been engaged months ahead. There is not the smallest chance to question the fact that the number of immigrants arriving this year will exceed the largest ever before placed on record; it is palpable and undeniable. Then, there is every reason to believe that the yield of grain and other crops in the agricultural districts will be such as to give farmers an abundance of means to carry out any improvements they may have in contemplation. The harvest may not be the largest we have had in proportion to the acreage planted, but we doubt whether it will be exceed by that of any former year in the aggregate quantity obtained, or in [illegible] mbination of [illegible] h or either of the latter considerably, but such a drawback is not more likely to be met with this year than in any other; so that we may assume the probability that those depending for their means upon the products of the soil will have, later in the season, a large amount of money, which they will be apt to invest in improvements requiring lumber in their construction. In addition to these important features in the situation, we find that universal confidence in the present and future permanence of the existing prosperity prevails, that capital is abundant and seeking investment, and that generally the country is in a state of remarkable prosperity.

Consideration of the facts we have just recited can hardly fail to leave, upon the mind of any lumberman who undertakes it, a very decided impression in regard to the future of his own business. It can hardly fail to convince him, we think, that the demand for the commodity in which he is interested is more than likely to reach a figure that will make the business of other prosperous years seem small by comparison. It is difficult to see how any other conclusion could follow, legitimately. We have a combination, apparently, of all the favorable circumstances required to make an active demand, and have it at a time when activity in business is decidedly the fashion, and when consumers are in the best condition imaginable for buying. From these circumstances, the *Lumberman* feels bound to conclude that the outlook for the trade during the coming summer and fall months is most flattering, and that the probabilities warrant the belief that, so far as the demand is concerned, it will be all that the most exacting lumberman could ask for.

In regard to the supply, the question that has most to do with the stability of the market is whether it will prove greater than the demand. The *Lumberman* is of the opinion that in reply to this question it may be truthfully said that it will not. If we restrict our inquiry for the moment to the Northwest, and the territory supplied from it, we have at our command reasonably accurate data upon which to base our calculations. Several weeks ago we published statistics of the logs obtained in all the important districts last winter, and those carried over in the streams, with estimates of what might be depended upon as the result of operations during the summer and along the various lines of railway running into the pineries, which, making allowance for logs that will be hung up or held over in booms, showed the amount that will probably be available for sawing this season to be, as near as possible, 6,250,000,000 feet,—an increase over last year's production of about 600,000,000 feet, or ten per cent. The actual cut may overrun this figure somewhat, but even allowing that it does so to the extent of increasing the excess as compared with 1880 one-half, or more, making it 900,000,000, or even 1,000,000,000 feet, we submit that the difference would not be greater than will be required to meet the demand. An increase of fifteen per cent. in the demand for the year, which is certainly not outside the bounds of probability, would use up all the excess in the output, and leave the lumbermen of the Northwest with no more stock on hand at the close than they brought from 1880. No one who remembers the trouble experienced last winter with broken assortments, and stocks too small for the amount it was necessary to sell from them, will venture the assertion that the total stock on hand, January 1, should not be increased at least twenty-five per cent. We do not see that there is much chance that it will be increased to that extent, or to any extent, this season. We do not see where the lumber is to come from. The logs to make it are not in sight, and if they were, all the saw-mill capacity in the Northwest would not avail to turn them into lumber. No talk of any excess in the supply over the probable legitimate demand, in the face of such facts as these would be simply ridiculous. The preceding figures and comparisons, to be sure, relate only to the Northwest; but in this case what is true of the Northwest is true of the whole country. Outside of this district there is no source from which any supply of pine lumber may be obtained that will in any way affect our conclusion, and as for the demand, it shows an equal likelihood of increased activity, east, west, north and south,—wherever lumber is sold, in fact,—which is all the more reason for believing that by no possibility can the supply exceed, or even equal, it.

These points being determined, there remains no question as to the probable condition of the lumber trade during the latter half of the season. It would be very strange, under such circumstances as are likely to exist, if it should not be active and satisfactory to a remarkable degree. With a good demand, and only just about enough lumber to supply it, operators ought to have things go as nearly their way as anybody could expect. They will certainly not be obliged to shade prices unless they choose to, they will not have to force sales in order to clear off surplus srock, and if they sell their lumber without making a fair profit on it, candid people, acquainted with the facts, will be very apt to say the fault is their own. There will be no occasion for practicing any of the tricks of the trade that are sometimes resorted to, for the purpose of securing customers, or getting some advantage over a competitor. As there will undoubtedly be business enough to keep every dealer fully occupied, no one need fear, if he is ordinarily industrious, but that he will get his full share of it, and, as the demand will call for pretty much all the stock that will be available, no one need worry himself about disposing of what he has or can get. It is not often that the demand and supply get into the respective positions in relation to each other that they now occupy. It is in all respects an exceptional occurrence, and lumbermen should make the most of it. We are inclined to think they will. When this market settles down upon a fair scale of prices, as it must sooner or later, we look for activity and firmness to rule all along the line, and for the members of the trade, individually and collectively, to make quick sales and good profits.—*Northwestern Lumberman.*

WOODEN IDOLS.

From that portion of the Apocrypha known as the "Wisdom of Solomon," the following quaint extract is made: Now a carpenter that felleth timber, after he had sawn down a tree meet for the purpose, and taken off all the bark skillfully round about, and hath wrought it handsomely, and make a vessel thereof fit for the service of man's life. And after spending the refuse of his work to dress his meat, hath filled himself. And taking the very refuse among those which served to no use, being a crooked piece of wood, and full of knots, hath carved it diligently, when he had nothing else to do, and formed it, by the skill of his understanding, and fashioned it to the image of a man or made it like some vile beast, laying it over with vermillion, and with paint, coloring it red; and when he has made a convenient room for it, set it on a wall, and made it fast with iron: for he provided for it that it might not fall, knowing that it was unable to keep itself, for it is an image, and hath need of help. Then maketh the prayer for his goods, for his wife and children, and is not ashamed to speak to that which hath no life. Again, one preparing himself to sail, and about to pass through the raging waves, calleth upon a piece of wood (an image) more rotten than the vessel that carrieth him. And verily desire of gain devised that (the ship) and the workman built it by his skill; therefore do men commit their lives to a small piece of wood, and passing the rough sea in a weak vessel are saved. For in the old time also, when the proud giants perished, the hope of the world governed by the hand, escaped in a weak vessel, and left to all ages a seed to generation. For blessed is the wood whereby righteousness cometh. But that which is made with hands (the image) is cursed, as well it as he that made it; he because he made, and it because being corruptible it was called god.

LUMBER SALES.

The Montreal *Gazette* says:—Our Quebec correspondent telegraphs as follows: On the street to-day I heard of the following sales: Joly's spruce deals mill cutting, $36, $26, $20 and $14, and charges 20 per cent, odd sizes, and a dram of McRae's elm at 28c. News from the other side indicates a dull market in the lumber trade.

A Cough is usually the effort of Nature to expel some morbid matter irritating the air passages of the lungs. It may, however, proceed from an inflamed or irritable condition of the throat, a slight rash or humor often being perceptible. Let the cause be what it may, the remedy should be Hagyard's Pectoral Balsam. A purely vegetable Balsamic throat and lung healer. For sale by all dealers in medicine, at 25 cents per bottle.

NOTES BY THE WAY.

WOODSTOCK.

This is a beautifully situated and well laid out town. The streets are wide, and, as well as the public parks, are planted with maple and other trees, which now (June 9th) are in full foliage. The town is surrounded by good farming land, occupied by an industrious class of people, chiefly from the north of Scotland. Many of the original settlers were those who were driven from their native glens at the time of the Sutherland evictions. Their descendants, however, have no cause to regret the event, though at the time, painful enough to the expatriated Highlanders. They are now amongst the most comfortable and independent of any farmers in Canada.

Railway accommodation is convenient and ample—the Credit Valley, the Grand Trunk and Great Western Railways, each give Woodstock a station.

Considerable manufacturing is carried on. Mr. F. B. Scofield is an extensive dealer in lumber. At his saw and planing mills in East Woodstock, he manufactures cheese boxes, wooden bowls, broom handles, etc. The establishment has the latest improved machinery. It is provided with a simple but ingenious contrivance, consisting of a rapidly revolving fan, which, being in connection with exhaust boxes or pipes leading to morticing, planing machine, etc., draws through itself, by the vacuum created, shavings, chips, and sawdust, into a general receiving pipe, thence into a box near the furnace of the engine, supplying the boiler with fuel and producing a cool and refreshing blast for the fireman. The sand-papering machine for finishing doors, etc., works like a thing of life.

There are several other planing mills and lumber dealers in Woodstock. James Hay & Co. carry on cabinet manufacturing on a large scale. Two organ factories are doing an extensive business. The largest black leather tannery (harness and upper) in the Dominion is here, operated by Messrs. J. & J. Grant. They also manufacture belting. About forty men are employed, and 1,500 cords of hemlock bark are used per annum at $5 per cord.

Another extensive industry, which competes with wood fencing, is largely carried on by the Metallic Spinning Co., Mr. J. G. Short, manager. This concern spins the steel barb fencing wire at a rapid rate. Five machines are employed in twisting the wire and inserting the barbs. Three men are kept busy finishing the coils of wire by putting them through various baths after leaving the machine previous to having them galvanized. The manufacturers claim that the material with which the wire is coated is not broken off when the galvanizing process takes place after the insertion of the barb between the stands. Large quantities of this material is sent to the North-West, where wood-fencing material is scarce.

Mr. Whitlaw, manufacturer of boilers, etc., has just completed a portable steam saw mill, with upright or muley saw, for M. F. Shaw, of Guatemala, Central America. Mr. Shaw has already been at Guatemala, and will bring his "rig" along with him. He proposes to cut mahogany and Spanish Cedar, which is found in abundance there, extending from the coast twenty miles into the country, and is in great demand. It is expected that several other portable saw mills will follow this trial machine.

SOMEONE who claims to have tried it asserts that boiled linseed oil and charcoal mixed to the consistency of paint, and applied to timber to be buried in the earth will give it almost the durability of stone or iron. It is claimed to make such woods as poplar, basswood, ash, etc., as good for fence posts as any that can be found. Basswood posts coated with this preparation have been taken up, after being seven years in the ground, as sound as the day they were set. The process is certainly very simple and inexpensive.

THE lumber establishment at Winnipeg of Clark & McClure, which Thos. Scott has managed for several years, has been bought out by H. Sutherland & Bro., who also purchased a quantity of lumber, shingles and laths now being flat-boated to Winnipeg by Clark & McClure.

THE ELECTRIC LIGHT.

MR. E. B. EDDY'S NEW ENTERPRISE—AN EVENT LONG TO BE REMEMBERED IN HULL.

On the 14th inst., the public of Ottawa and Hull had for the first time a full practical test of the value of the electric light. Much as has been written and said upon this subject, vivid as may have been the description of it, clever as may have been the themes advanced about it nothing could have brought its beauties and utility so lucidly home to the minds of the public at large as the grand exhibition of its powers as shown in the extensive works of the most enterprising and shrewdest business man of the Ottawa Valley, Mr. E. B. Eddy, of Hull. Mr. Eddy, in its adoption, has, of course, been actuated by a desire to have what was best at the cheapest rate. No false economy. In all his transactions he fully realizes that there is that which scattereth abroad, and yet increaseth. In nothing is found penny wise and pound foolish, and the success of the electric light in factories is another laurel added to his great and growing wreath. The fact that his mills and factories would, for the first time, be illuminated by electricity sufficed to draw a great crowd of visitors to the spot from the city, and the population of Hull was out *en masse* to see what would be the result of the last experiment of the active business mind which has almost built up the young city. There are few in Central Canada who will not acccpt his conclusions as correct, but even his most ardent admirers were hardly prepared for the sight that awaited them. Crossing to Hull from Ottawa just as twilight was fading away, the northerly bank of the city seemed bathed in a mellow moonlight, but as it was long before the hour of Luna to be on her course along the horizon, the effect could not be attributed to her gentle influence. On reaching the Union Bridge the cause was self-evident. Hull seemed to have instituted an independent "order of full moons." Three grand lights, in size larger than any star, with a wonderful brilliancy, and not less inviting to the eye than the moon, lighted up the whole scene, showing the fine tracery of the bridge, the fine spray of the Chaudiere, and the bold outlines of the buildings on both banks of the river with wonderful distinctness. Advancing towards Hull, the light became gradually brighter, the shadows defined more sharply, and faces and colors more easily distinguished, and even the most skeptical were fain to confess that the light was a grand success. It was, however, in the vicinity of Mr. Eddy's mills that the beauty and effect of the light was most brilliantly brought out. The wide spread yards were all as bright as day, the windows of all the shops showed as if suns were beaming inside them, while the lights in the other mills and the shop windows of the city wore a sickly glare, like the dying torches at the end of political demonstrations. In the big mill, in which all the machinery had been stopped, and which was thrown open to all visitors, the sight was a study. The buiding was crowded with visitors, and here better than anywhere else the purity of the light was visible. The most delicate colors were as plainly discernable as in the brightest sunlight. Among the dresses of the many ladies who crowded the place with very young children, the gayest toilets shone out in their full beauty. No confounding greens with blues, no turning delicate mauves into vulgar reds. It was no wonder that the expressions "*C'est beau*," "*C'est magnifique*," were frequent on the lips of the lady visitors. The work that Mr. Eddy has undertaken in introducing this light into his premises it would not be easy to rightly picture, and the best description of it will give but a feeble idea of its magnitude. The total number of lights employed is forty, extending from his residence at the corner of Main street and Brewery street to the river bank opposite the Parliament Hill, and all through the various apartments of his numerous factories, storehouses and mills. These lamps are located as follows:—One in the front of his private residence, which throws a brilliant light over the whole square down to the river's edge; four in the sash factory, two being on the first floor where the planers are situated, and two on the second floor which is occupied as the window-frame and cabinet makers' department; one is located in the box shop, by no means the least extensive of the premises; two others are in the circular sawmills; three more are found in the large sawmill; two on the upper platform; two more in the small sawmill; three under the main platform; four in the pail shop; one in the machine shop; five in the match shop; one in the washboard shop; two in the lower sawmill, one on the lower platform, and four in the lumber yard. Each of these lamps has an illuminating power equal to two thousand candles, and sheds a brilliant light, with strongly marked shadows, over an area of 12,000 square feet, the whole of the lamps having an illuminating power equal to 80,000 candles, and lighting a combined area of 480,000 square feet. The machinery from which this light is derived is placed in what was formerly the stone grist mills occupied by McCormack & Sons at the back of the match factory. The machine used is the "Brush dynamic electric," size number 8, and driven by a powerful turban wheel. Its dimensions are 89 inches in length, 28 inches in width, 36 inches in height, with a weight of 4,800 pounds. The electricity is generated from an armature, which revolves at the rate of seven hundred revolutions per minute, driven by a belt twelve inches wide over a pulley 20 inches in diameter. The armature is placed between four heavy relays of insulated copper wire, containing in all 20,000 feet lineal measure. The whole machinery is located in the electrician's room, and under the present charge of Mr. George W. Hoag, of Mr. Brush's electric works, of Cleveland, Ohio. In this room is also found the automatic governor, an ingenious invention which regulates the current of electricity according to the number of lights in use, thus enabling any number of the lamps to be shut off or used without altering the speed of the main portion of the machine. The lamps used are the size known as number 3, each carrying double rods, which enable them to be supplied with four carbons, each twelve inches long, copper-plated, for the better conducting of the electric current, manufactured according to the Brush patent from coke. The lamps are calculated to burn for 16 hours without a renewal of the carbons, and the cost of each lamp is calculated to be only one cent per hour, each lamp being supposed to burn from an inch and a-half to two inches per hour, the upper carbon position burning about double the quantity consumed by the negative. The apparatus is of the same kind as has been so extensively introduced into the United States by the Brush Electric Company of Ohio, and into Europe by the Anglo-American Light Company of London, England. The same sized machine, with its full power concentrated in one light, is now in use on one of the finest vessels in the British navy. Mr. Millan, Mr. Eddy's manager, will have the general management of the apparatus, assisted by Mr. Mousseau, head millwright of the establishment, when Mr. Hoag returns to the United States, as he will do in the course of a few days. The event will long be remembered in Hull, and it need not be wondered at that it was made a festival of in the city. During the evening the Hull band, led by Mr. Durocher, was out, and played for some two hours about the city and serenaded Mr. Eddy. The turning out of the corps was voluntary. In getting the best and cheapest light for his place that he could, Mr. Eddy has done the public as well as himself a benefit, for the Union Bridge and its approaches were never so well lit as they were last night by his "new order of full moons."—*Citizen.*

Beechwood for Paving.

The Edinburgh authorities are at present making a test of the capabilities of beechwood as a paving material, and for this purpose have laid a wide crossing at the junction of Melville street with Queen's Ferry street with well-seasoned blocks of this wood. A slip of chilled iron, grooved to afford a grip for horses, is introduced between each block, and the interstices are all filled in with creosote.

"Their Name is Legion"—the people who praise that matchless medicine, **Burdock Blood Bitters.** It acts at once upon the Secretions, the Bowels, the Liver, the Skin and the Kidneys. It purifies the Blood, dispels all foul humors, and strengthens the nervous and debilitated system. No known remedy can do more. Try it and be convinced.

THE MANUFACTURE OF WOOD PULP.

Wood pulp, which has of late years acquired some importance as a substitute for rags in the manufacture of coarse and fine papers, is obtained in two different ways:—1, mechanically, by the mechanical disintegration of wood; 2, chemically, by treating the wood with chemical reagents.

1. Preparation of cellulose by the mechanical method.—Wood lately felled and stripped of its bark is ground between heavy millstones beneath the surface of running water, passing thence through a sieve or bolter, as a fibrous mass, which can be used, with or without admixture of rags, as a substitute for ordinary paper pulp. The wet mass of woody fibre is deprived of its superfluous moisture by pressure and in that state is sent to the paper-mills. This compressed fibre, even when boiled, will not give a fine-grained paper, for which purpose an addition of 25 to 80 per cent. of rags is necessary. Wood paper acquires a yellowish or greyish tinge with exposure, for which reason also it is unsuited for finer purposes. Wood fibre is not pure cellulose, but contains a mixture of intercellular substance, which has held the plant-cells together. Pure cellulose forms 30 to 60 per cent. of ordinary wood pulp. Wood pulp is very short in the fibre, owing to the method in which it is prepared, whereas pure cellulose is longer in the fibre, felts better, and is more suitable for papermaking. Wood pulp is therefore employed for the coarser sorts of paper, whilst the chemically prepared cellulose is well adapted for the finer kinds.

In 1871 some experiments were made by O. Meyh, of Zwickau, in regard to grinding wood after steaming it in steam boilers. The results were most satisfactory, and the method is now used in the fabrication of brown papers. Independent experiments were made about the same time by E. F. Meisner, of Roth-Dannitz, near Stolp, Pommerania, in the boiling of wood with and without caustic lye, grinding, and preparing paper from wood fibre obtained by the first method, with and without an admixture of rags. A partnership was concluded between H. Voelter and O. Meyh for the working of certain of these new processes, which are now known in Germany as the Voleter-Meyh patent. Aug. Erfurt, manager of the wood pulp and paper works of Bezner & Co., endeavored to improve the process by the ebullition and prolonged immersion of the wood in soda lye. Erfurt subsequently varied this process by boiling the wood twice before cooking it in the caustic soda, a process which yielded wood pulph of a superior quality. The papers so produced have been gradually improved, and now packing-papers of excellent quality are thus manufactured, which can be used for a variety of purposes for which ordinary papers are more or less unsuited. For many purposes the natural brown colour of the paper is a recommendation, and not only for cartridge-cases, book covers, packages, and the like, but also for floor-papers it is found most useful. Erfurt prepares his "lignite pulp" in four qualities, which can be used separately or combined in different qualities of paper.

2. Preparation of cellulose by the chemical method.—The preparation of cellulose by chemical means has recently made greater progress, as a much finer and whiter product is thus obtainable than by the mechanical method; still there is, unfortunately, one great disadvantage common to all the processes yet adopted—the expense, costly machinery and processes being employed for an object really attainable by other means. These consist in the continuous action of chemical reagents, whereby the expenditure of fuel is rendered unnecessary, and the great wear and tear of plant involved by the use of high steam pressure avoided.

A fresh starting-point in cellulose manufacture was afforded by the establishment of the Manachunk Wood Pulp Works Company, at Philadelphia, in 1864, whose products were exhibited in Paris in 1867. At this establishment the cellulose is prepared by Houghton's and Coupier's methods, by boiling the wood in acetate of soda under very high pressure. This branch of manufacture has been further investigated and improved upon by various parties.

In 1868 the Gloucestershire Paper Company started a large cellulose and paper manufactory in England, for paper-making without rags, thereby affording demonstration of the fact that paper can be manufactured from cellulose without any admixture of rags. A heavy outlay, stated to amount to £25,000, was involved by the experiments of the company.

In 1870 a company of English and Swedish capitalists started five large cellulose manufactories in Sweden, on the American system in use at Cane Mills, Sydney, N.B.

On this system the five manufactories in question, and other English and American establishments, are now worked as well as six large manufactories in Germany. Some manufacturers have adopted other methods, and have engaged in fresh experiments and researches, chiefly with a view to remedy defects of construction in the apparatus employed.

In the different methods hitherto adopted acids (muriatic and nitric) are used, to the action of which the wood finely rasped is exposed until the fibre is laid bare, whereby a portion of the cellulose is converted into glucose, whence alcohol is obtained by fermentation; after this the wood is treated with acetate of soda until all the soluble matter is extracted, and finally is washed. This method does not admit of the acid being used again, and moreover requires the vessels employed to be of more than ordinarily indestructible materials.

In Watt & Burgess' method, finely-chopped wood is treated with acetate of soda of 4 degs. Reaumur, under a steam pressure of 60 lbs. to the square inch. Here very much depends on the shape of the wood: in a highly comminuted form, as sawdust, the circulation is impeded; shavings, on the other hand, take up too much space, so the wood is treated with the lye in a series of digestors, under high steam pressure, and the soda afterwards extracted from it by the action of steam. As the lye contained therein is removed by the steam and the residum calcined in ovens of special construction, it is obvious that the method adds considerably to the cost of the process, and it is preferable to use the acid once only and allow it afterwards to evaporate naturally in open pits or to remove it by heating in closed vessels so contrived as to entail no extra firing. Cellulose prepared in this way requires no mechanical manipulation, but is simply bleached with chloride of lime before use. Chemically prepared wood pulp is superior to that prepared by mechanical means, being more elastic and longer in the fibre, and as before mentioned, can be employed for paper-making without any addition of rags.

Two Thousand Dollars.

The easiest, cheapest and best way to secure the above amount is to apply for membership in the Mutual Benefit Association of Rochester, N.Y. Pay Dr. S. B. Pollard, 56 Bay Street, one dollar for four medical examinations, he will send your application to the head office, if you are accepted as a member they will issue a certificate of membership, which, on payment of eight dollars, entitles you to full benefits as a member, should you die to-morrow, next day, next week, next month, or any time within three months, this Association will pay to your heirs, or assigns, the sum of two thousand dollars. At the expiration of the three months all you have to do is to pay your pro rata amount, which is from 20 to 75 cents on the death of some other member, who has done nothing worse than to die during the three months just past. By paying your assessments on deaths, you keep your certificate alive, and at the commencement of the second year you are assessed two dollars per thousand to keep up office expenses, etc., for the next year. No easier, surer or better schemes to carry two thousand dollars has ever been devised than the Mutual Benefit Associates, of Rochester, N.Y.
5-1-13

ZOPESA.—A healthy man never thinks of his stomach. The dyspeptic thinks of nothing else. Indigestion is a constant reminder. The wise man who finds himself suffering will spend a few cents for a bottle of *Zopesa*, from Brazil, the new and remarkable compound for cleansing and toning the system, for assisting the Digestive apparatus and the Liver to properly perform their duties in assimilating food. Get a 10 cent sample of *Zopesa*, the new remedy, of your druggist. A few doses will surprise you.

Hagyard's Yellow Oil is a perfect panacea curing by external and internal use all inflammation, pain and soreness; Rheumatism, Stiff Joints, Deafness, Colds, Kidney complaints, Burns, Frost Bites, and Flesh Wounds of every variety. For sale by all dealers.

WANTED,

An efficient and reliable correspondent for the CANADA LUMBERMAN, in each of the following cities, viz. :

QUEBEC, OTTAWA,
MONTREAL, HAMILTON,
And LONDON.

For futher information, address

TOKER & CO.,

CANADA LUMBERMAN OFFICE, PUBLISHERS.
Peterborough, Ont., June 13th, 1881.

Travelling Agent.

MR. A. L. W. BEGG has been appointed agent for the CANADA LUMBERMAN, and is authorized to collect subscriptions and grant receipts therefor and to make contracts for advertisements appearing in its columns.

The Canada Lumberman

DEVOTED TO THE LUMBER AND TIMBER INTERESTS OF THE DOMINION.

PUBLISHED SEMI-MONTHLY BY
TOKER & Co. PETERBOROUGH.

Terms of Subscription :

One copy, one year, in advance	$2 00
One copy, six months, in advance	1 00

Advertising Rates :

Per line, for one year	$0 90
Per line, for six months	50
Per line, for three months	30
Per line, for first insertion	10
Per line, for each subsequent insertion to 3 mo's.	05
Cards not occupying more than 12 lines (1 inch) per annum	8 00
Cards not occupying more than 12 lines (1 inch) for six months	5 00
Cards not occupying more than 6 lines per annum	5 00
Cards not occupying more than 6 lines, for 6 mo's	3 00

Special rates will be made for page, half page and column advertisements.

Advertisements intended for insertion in any particular issue should reach the office of publication at least three clear days before the day of publication, to insure insertion.

All communications, orders and remittances should be addressed and made payable to TOKER & Co., Peterborough, Ont.

Communications intended for insertion in the CANADA LUMBERMAN, must be accompanied by the name of the writer, not necessarily for publication, but as a guarantee of good faith. Communications to insure insertion (if accepted) in the following number, should be in the hands of the publishers a week before the date of the next issue.

PETERBOROUGH, Ont. JULY 1, 1881.

WE desire to call the attention of our readers to the sale by tender of the extensive saw-milling property at Parry Harbor, belonging to the Ontario Bank. In addition to the saw-mill, which is very complete, there are extensive and valuable limits attached thereto, which, after all, should be the great *sine-que-non* of such properties.

A CORRESPONDENT of the *John O'Groat Journal*, in notes of a trip to Edinburgh from Wick, dated May 25th, says :—"The scenery at Blair Athole, as witnessed from the railway, is surpassingly grand. There the trees were in bloom, and the scent of the sweet briar was wafted around us like a cloud of incense. We were informed that the value of the growing timber, aged fifty years, on one hill crest, used chiefly for railway sleepers, would be about £30,000, (nearly $150,000.) One of the most profitable investments is this growth of oak, the bark of which is used largely for tanning purposes."

WE have a post-card asking for information as to where black walnut trees, suitable for transplanting, can be obtained, from someone whose signature we cannot make out. The writer says he desires to plant out a number as an experiment, as he understands that a gentleman in Quebec has already planted out some 400 with satisfactory results. Nursery men having black walnut trees suitable for planting would evidently find it to their advantage to advertise them in THE CANADA LUMBERMAN. We hope, too, that our correspondent will accept this as a reply to his card, as we do not know where he would get what he wants, and cannot address him personally for the reason already stated.

ORDERED HOME.

Perhaps no better evidence of the firmness of the western lumber market could be afforded than that which we have in the recent decision of the Chicago lumber dealers to order home, with the intention of keeping them at home, the gentlemen whom they now have on the road soliciting orders. These travelling salesmen were the outcome of a period of depression, when it was almost a matter of financial life and death to make sales, of many other things as well as lumber, at almost any price, and although the necessity of making such sales has passed away, the travelling salesman has become such a fixture that, however desirable, in the interests of sellers, it will be difficult to get rid of him entirely. It is generally conceded that this following of buyers into their own offices does more to break or keep down prices than anything else that can be done. They must shade prices to do business, because unless the retail dealer can buy, or be made to fancy he is buying cheaper from the travelling man than he otherwise could do, he is likely to withhold his order, until it suits his own convenience to send it to headquarters. Now, if these things be so, it follows that the withdrawal of these gentlemen of the road must not only do away with the evil tendencies which their visits are calculated to produce, but afford the most substantial evidence to consumers that lumber is no longer a drug, and that the holders thereof feel that they can afford to hold on until the consumer requires it at the price which he has put upon it. And this is the true position of every holder of lumber. It is not like butter, cheese or eggs, or like the ribbons and bonnets of the dry goods merchant. It will not, if properly cared for, spoil in a single season like the first, or become unfashionable and therefore worthless like the latter. If the production of a year has exceeded the legitimate demand, the true way to adjust demand and supply is to hold on to what you have got—it will be none the worse of a little more seasoning—and curtail production—the trees that are left standing another year will neither grow rancid or unfashionable.

THE NEW LAND REGULATIONS.

IN another column will be found the new regulations recently issued by the Dominion Government with regard to their lands in the North-West. A persual of them can scarcely fail to convince the most sceptical that they are eminently favourable to the settlement of that country, but less there should be any doubting ones in this respect, we cannot do better than transfer to our columns the following comparison of the prices charged for wild lands in Minnesota and Dakota, by the most prominent competitors of the Dominion Government and Pacific Railway Syndicate, with those now in force in our own Nor'-West, as we find them set forth in the columns of the *Monetary Times* :—

IN THE CANADIAN NORTH-WEST.

Government lands within the Railway Belt may be acquired as follows : A free homestead of 160 acres on condition of settlement and cultivation for three years ; also, a pre-emption of 160 acres adjoining at $2.50 per acre, by instalments covering ten years.

Government lands may be acquired, beyond the distance of 24 miles from the railway, as follows : A free homestead of 160 acres on the same conditions as above ; and also a pre-emption of 160 acres at $2.00 per acre cash, at the expiration of three years. In addition to the 320 acres thus acquired, a settler's wife may obtain 160 acres as a free grant, on condition of cultivating 10 acres thereof to forest trees, thus making 480 acres to man and wife.

IN DAKOTA AND MINNESOTA

Government lands may be acquired within any Railway Belt as follows : A free homestead of 160 acres, on conditions of permanent improvement and continuous residence for *five* years ; or (not *and*) a pre-emption of 160 acres, on condition of permanent improvement and continuons residence for one year, an $2.50 per acre cash. A settler may in addition to either homestead or pre-emption take up a free tree-culture claim, on condition of planting 10 acres thereof with trees.

Government lands outside the railway limits may be acquired on similar terms to the above, but the price for pre-emptions is $1.35 per acre instead of $2.50.

N.B.—It should be observed that the United States Government does not permit, as does that of Canada, the same individual to acquire both homestead and pre-emption claims. He must take one or the other—160 acres instead of 320.

IN THE CANADIAN NORTH-WEST.

The Canadian Pacific Railway Company asks for its lands, within 24 miles of the road, a uniform price of $2.50 per acre, payable by instalments, with a rebate of $1.25 per acre for substantial improvements and cultivation.

IN DAKOTA AND MINNESOTA.

The Northern Pacific Railway Company asks from $2.50 per acre upward, according to quality and location, and no rebate is promised to the settler who cultivates his farm. As a fact the prices of lands contaguous to the railway, range as high as $10 and $15 per acre.

The circulars of the St. Paul, Minneapolis and Manitoba Railway Company do not announce the prices of lands, and all the best farms adjacent to the line have now been taken up. In all sales, however, the company promises a "rebate of nearly one-half the purchase money for breaking and cultivating the land." The actual prices of farms are graduuted according to quality of the land and distance from a station.

AN ORANGE PEELED.

To the Editor of The Canada Lumberman :

MR. EDITOR,—A month or so ago I sent you a short sketch of all I thought would be interesting to your readers of this part of Canada, therefore, at this time, I can only present you, as it were, with a squeezed orange. The most interesting feature in your paper, to the general reader, is information about woods and forests. In my time we used to hate the timber because it stood between us and johnycakes, and moreover for the sweat it caused us to clear the land, but tastes change with time—nothing pleases us better now than the "forest primeval." Forty years ago one in this place could look in no direction without seeing scores of towering hemlocks, many of them "girdled" to accoplish their cheap destruction. They have all long since disappeared and left no traces of their existence—faded away like the red men under the fostering care (?) of Yankee legislation. In those days the havoc made of elm, maple, brown ash and basswood, for potash, is fearful to contemplate, but it was a case of life and death between the men and the trees. Although many of the inhabitants favored the forest by a "wooden look," they choose to be survivors.

The French mode of clearing low land west of here was by fire, which destroyed all vegetable life, and they have no taste for planting trees. A look across their level settlements reveals nothing but whitewashed houses and cedar rails. The want of wood has long since bore heavy upon the poor.

One of your correspondents speaks of the grievences of small dealers in lumber, owners, perhaps, of an old up-and-down mill. Now, I feel for those martyrs, having suffered a moral crucifiction in common with them. One of my townsmen, on the rack, that is, selling boards to an old farmer, after the torture was suspended, gave it as his deliberate opinion that anyone, after the long agony of dealing in lumber with those close-fisted, selfish specimens of humanity, should, without any further preparation, be entitled to enter into the blissful fields where the good niggers go. With the joiner and carpenter we have no difficulty, they know what they want and know what it is worth, but the potato-digger, in this business, seldom or never deviates into common sense and fair dealing. That anyone else has as good a right to an equivalent for his money as himself, never penetrates his agricultural skull. Our patience has often gave way, and forced the pig-breeder to "unload" and go his way. We have another customer far worse than the tight man, for the tight man, to his honor, be it said, means to pay, but the fellow, who, with malice aforethought, comes for a few boards is the man we mean. He wishes to be trusted a short time, of course. He banters you long on the price, to convince you that the debt will bear heavy on his conscience till settled. A year rolls away, but the slight indebtedness has long slipped from his memory ; if reminded of it, he views the transaction with the complacency of Wilkins Macauber on a similar occasion. You feel puzzled ; the law offers you no redress ; the man has no effects outside of exemption ; you don't know in what category to place your act ; it is too business-like for charity, and yet looks more like charity than business. Finally the unwelcome reflection forces itself upon you, that you have really given alms without the smallest right to claim the credit of it.

E. CHANDLER.

COUNTY MISSISQUOI, P.Q.

A NEW INDUSTRY.

O. A. Gould, who resides on the Pennoyer farm opposite this city, has established a new line of business that is of considerable import ance to the public. Mr. Gould has provided machinery by which he manufactures cedar strips for lining trunks, wardrobes, furniture, clothes-presses or for inside finishing for houses if needed. The machinery consists of a set of knives 6½ feet long, which commence on the outside of a cedar log and cut it in one continuous strip in any thickness required from the thirty-second part of an inch to half an inch in thickness, the strips of wood being delivered in a compact roll ready for use as soon as cut. The importance of this manufacture consists in the fact that cedar wood is a complete protection against all kinds of vermin, such as ants, cockroaches, moths, lice and worms of all kinds. The design is to use this cedar for ceiling in pantries, clothes-presses, store-rooms and all other places where these pests of the household congregate. It can also be used for flooring, if desired. Cedar wood neither shrinks nor swells under the influence of moisture or heat, and can be papered or washed without destroying any of its qualities. The objection to its use in building has been its smallness, making the lumber very narrow and imperfect when it is sawed in the usual manner, but by Mr. Gould's method of paring it off in a thin slice, the strips can be made 50 feet long, and it is so flexible that it will not break, and the imperfections in the grain do not appear to any extent in the sheets. For ceiling, it only requires that the edges be leveled and glued together, and the work can be made perfect.

Mr. Gould thinks it can be used in matrasses, thus making them always free from all danger of infection or vermin. This method of treating cedar wood will be a great benefit, and bring this hitherto almost worthless product of the forests into demand.—*Saginaw Herald.*

THE Toronto *Globe* says :—It is related that John Brower, a New York furniture maker of about sixty-five years back, who was the first to introduce the use of black walnut in his trade, found very great difficulty in inducing the public to use the wood. The current of fashion was then running strongly on mahogany, and it may be added fashion never decreed the use of a more beautiful or enduring wood. In those days there was plenty of black walnut in New York State, and the Erie Canal was much used as a "floatable stream" for the logs. Then Western Pennsylvania and Michigan became the great sources of black walnut ; after that, Ohio and Indiana, in which States fabulous quantities of the now precious wood were burnt up in clearing, or split into rails. In Western Ontario also, the same method prevailed of disposing of what was then deemed a cumbersome nuisance. At the present day it is necessary to go beyond the Mississippi for black walnut, and the price of the wood in New York is about $100 a thousand. No doubt, as black walnut gets scarcer, the furniture makers will endeavor to give dame fashion a twist backward into mahogany, or forward into the adoption of some of our splendid native hardwoods. Circumstances seem to point to the black birch as the supplanter to a great extent of the walnut. There are prodigious quantities of this wood in Ontario and Quebec. In large tracts of the Muskoka and Parry Sound districts it is the prevailing timber, and on the best land it grows to a great size. Farmers who have black birch standing in accessible situations would do well to cease cutting it for the present.

COOKING by electricity will be carried on at the French International Electrical Exhibition.

ST. JOHN, N.B.

From Our Own Correspondent.

STREAM DRIVING.—It our last reference was made to the favorable condition of the water in the rivers and streams for bringing out the logs. While it lasted the freshet was very favorable indeed, but coming so late in the season it fell off very rapidly,and considerable quantities of logs were "hung up" in consequence. The great bulk of the logs, however, were got out, and those left behind for the present will, no doubt, all come to market in the course of the season.

STEAMSHIPS.—Referring to this new element in our lumber carrying trade, its development appears to be quite rapid. Already this season eleven vessels of this description, of an aggregate tonnage of 12,076, have been cleared with deal cargoes. Another (the *Anny Dora*, 1,107 tons) is now loading, and we hear of five others recently chartered, which may be expected to arrive in a few days. Estimating these latter at 1,000 tons each, we have seventeen steamships of 18,183 tons engaged in this trade up to the present time.

FREIGHTS.—A large number of vessels have arrived in the last few days, and the freight market is much depressed. The latest transaction reported, was at 53/. for Liverpool, which may be quoted as about the market rate to-day.

SHIPPING LIST.—The following is the list of square rigged vessels in port, with their tonnage and destination :—

Riverside, 1,234, Liverpool.
Equator, 1,272, Liverpool.
Northumbria, 1,592, Liverpool.
Endymion, 1,298, Liverpool.
Alphens Marshall, 1,100, Belfast or W.C.E.
Edward Kidder, 1,014, Newport or Liverpool.
Arabia, 957, Liverpool.
Nettie Murphy, 1,373, Liverpool.
William, 998, Waiting.
Douglas Campbell, 845, Marseilles.
Granite City, 776, United Kingdom.
Effort, 378, U. Kingdom or Continent.
Ilma, 437, E.C. Ireland.
Africa, 1,130, Cardiff.
Loanda, 1,500, Liverpool.
Wanderer, 438, Ireland.
Huano, 843, Belfast.
Sverre, 404, United Kingdom.
Sverre, 600, E.C. Ireland.
Blanco. 343, discharging.
Josie Trop, 1,100, Gibralter, for orders.
Venus, 734, Ireland.
Cecilia, 334, France.
Nytghan, 1,254, waiting.
Liffey, 845, Liverpool.
Ashlow, 639, Cork or Limerick.
Charles, 1,500, Liverpool.
L. H. D'Veber, 615, Londonderry.
John Murphy, 1,479, Liverpool.
Bonito, 599, Galway.
Broderine, 453, Marseilles.
Anny Dora, S.S., 1,107, Liverpool, London or B.C.D.
Taganrog, 514, Marseilles.
Loining, 847, St. Nazaire.'
E. W. Gale, 320, discharging.
Revolving Light, 1,317, Liverpool.

SHIPMENTS.—The shipments of deals and other sawn lumber are as follows :—

For Europe.....15,639,000 Sup. ft.
" United States.....2,987,000 "
" West Indies..... 100,000 "

St. John, N.B., June 18th, 1881.

DULUTH.

The Duluth section will this year manufacture sixty million feet of lumber as follows :—

Peyton & Co.	5,000,000
Graff, Little & Co.	10,000,000
A. M. Miller	8,000,000
Payne & Co.	10,000,000
Grey & Co.	4,000,000
Knife Falls Lumber Co.	25,000,000
Total	62,000,000
Lovejoy & Co., shingles	14,000,000

This is nearly double the amount cut last year, and will be increased next year to nearly 100,000,000 feet by new mills and increasing capacity of those already built.

As freights rule low at present, and may continue to do so for a time, it is to be feared that shippers may be tempted by this to send cargoes on the open market to an extent greater than the present state of trade warrants. It is only by withholding every foot of timber as long as possible, so as to enable this market to right itself, that the business can be rendered profitable to those interested in it.

TIMBER NEWS.

During the week ending 18th June, 1881, the undermentioned timber passed through the slides mentioned :—

DES JOACHIMS SLIDE.

Rafts.	Owners.	Cribs.	Pieces.
1	David Moore	93	2,225
1	William Mackey	131	3,107
1	J. & G. Bryson	94	2,421
3		318	7,753

CALUMET SLIDES.

Rafts.	Owners.	Cribs.
1	J. Poupere	13	350
1	Bell & Hickey	113	3,350
1	W. Mason	93	1,950
3		219	5,650

ARNPRIOR SLIDE.

Owners.	Cribs.	Pieces.	Saw Logs.
Wm. Mason	...	....	6,000
Wm. Croft	...	....	500
— McGregor	...	....	1,000
Jonathan Fraser & Co.	241	5,972	23,442
	241	5,973	30,942

CHAT'S SLIDE, FROM 13TH TO 20TH INST.

Rafts.	Owners.	Cribs.
1	J. O. B. Latour	97
1	Gillies Bros.	88
1	Fraser & Curry	114
2	J. Francis & Co.	243
1	Bell & Hickey	119
6		661

THROUGH GATINEAU BOOM SINCE 16TH INST.

Owners.	Saw Logs.
G. B. Hall & Co.	15,879
W. C. Edwards & Co.	13,497
Hamilton Bros.	4,058
J. McLaren & Co.	4,260
	37,694

And 1,319 pieces long red pine belonging to McCracken, Boyle & Co.

With the Approach of Spring, Biliary Complaints prevail that often lead to serious results. Guard against their attack in time by using Burdock Blood Bitters : the best Liver Invigorator, Kidney Corrector, Regulator of the Bowels and Secretions, and the purest, most permanent Tonic in the world. For sale by all dealers.

If you suffer from any chronic disease arising from Impure Blood, Sluggish Liver, disordered Kidneys or inactivity of the Bowels; if your Nervous System is deliberated from whatever cause arising, do not despair, but procure a trial bottle of Burdock Blood Bitters; it will only cost 10 cents. Large Bottles $1,00. For sale by all medicine dealers.

LUMBERMEN

will save money by going direct or sending to F. CRUMPTON, 83 King St. East, Toronto, for their Watches and Jewellery, or Silverware and Clocks, etc. If you cannot come yourselves send your orders and I will guarantee just as good satisfaction as by a personal selection. Goods guaranteed exactly as represented or your money refunded. Watch and Jewellery repairing and manufacturing by competent workmen at Reasonable Prices. We make a specialty of HEAVY CASED WATCHES suitable for Lumbermen.

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Free omnibuses to and from all trains.

WILLIAM MACKIE, of St. Lawrence Hall, Port Hope, PROPRIETOR.
J. E. McINTYRE and J. H. MACKIE, Clerks. b20

LIGHTING SAW-MILLS BY ELECTRICITY

The rapidity with which the electric light has advanced from the experimental to the practical stage is something remarkable, even in the present wonderful age. It has long been known to scientists that what is termed the voltaic arc, which is simply a continuous electric spark, afforded a light but little inferior to sunlight; but it is only within a few years that any attempt has been made to turn the fact to practical account. In the last half dozen years or so, electricians have spent a vast amount of time in studying the principles of electric lighting, and in experimenting with appliances for the successful and economical application of these principles in practice. That the time and money so employed have not been wasted, is evidenced by what has already been accomplished. We find now several different styles of light in use, and several more that have been tested by their inventors with very flattering results. The electric light, in fact, has passed the experimental part of its career, and appears now as something that has stood the test of use without failure.

The *Lumberman* pointed out to mill owners some months ago the possibilities of electricity as a means of illuminating saw-mills, planing-mills, furniture factories, and all woodworking shops that are, either all or part of the time compelled to run nights. The lack of a good light has been a serious obstacle in the way of night running in all kinds of mills and factories, and particularly in these that from the nature of the material operated upon are liable to damage by fire. Gas and oil have both been used, and in many cases the result has been the destruction of the mill by fire. And when no accidents have occured the light obtained has invariably been found to be of poor quality, rendering it impossible for employes to accomplish anywhere near what they would in daylight. Indeed, the inferiority of the best light hitherto obtainable, and the risk inseparable from its use, have led many manufacturers to prefer the alternative of doing less work to that of attempting to operate their mills or factories with such a dangerous and ineffectual means of illumination. We have been told by a good many saw-mill men that they would gladly run their mills night and day if they could find some way of lighting them without increasing the danger of fire, and in such a way that effective work could be done.

It seems to us that in electricity mill men of all kinds will find exactly the light they have been looking for. It is unquestionably the best light that has ever been invented, as far as its illumination power goes, and there is certainly no doubt about its superiority in point of safety. Besides, it is really the cheapest of all known methods of lighting large areas. The principal item is the first cost of the machines and the power; these once bought, there is nothing to do but to keep the engine running and supply the lamps with carbons, the latter forming even for a considerable number of lights, but a nominal item of expense. The cost of producing the light, after the electric machine and its motive power are obtained, would hardly amount to anything for the operator of a mill or factory. In all woodworking shops, at any rate, the means of producing power is so cheap that it practically cuts no figure, so that by adopting the electric light the expense of making the mill as bright as day is reduced to an exceedingly small sum. The wear and tear of the machines used, and of the lamps, we understand, is very slight, so that there is no lack of economy on this score. With electricity, all fear of fire, resulting from the lighting of a mill, would be groundless. The light is not a flame, but a spark, and as it develops no appreciable amount of heat it cannot set fire to anything; while any accident that disturbs the position of the light puts it out at once.

We do not well see how anything in the way of a light more perfectly adapted to the use of saw-mills, and all sorts of mills, in fact, could be devised. It is maintained altogether by power, which is an indispensable adjunct to every manufacturing establishment, and can in most cases be applied to an electrical machine at a very small cost. When the apparatus and lamps are once in position, the light is produced steadily and with but little expense and trouble. It is always ready when it is wanted, is lighted instantaneously by the mere shifting of a belt, and involves in its maintenance scarcely any extra trouble or expense. It emits no smoke or disagreeable fumes, is perfectly clean, and what is most important, is entirely free from danger, which cannot be truthfully said of any other means of turning darkness into light that is known to the world. It seems to possess all the advantages that any one could ask for, and so few and such unimportant disadvantages that they are hardly worth considering.

It is probably known to most of the *Lumberman's* readers that there are several kinds of electric light that have been perfected, though only one has yet been sold to any considerable extent. This one has been adopted by most of those who have already tried this sort of light, mainly, we suppose, because it has, until lately, been the only one of which the sale has been vigorously pushed. The principle in all the machines is the same. They all use dynamic electricity and carbon lamps, and so far are all alike; the difference in the systems is in the machines for generating the current, and in the devices for feeding the carbons in the lamps, by which various degrees of steadiness and perfection are produced in the light. It is important in selecting a machine that these differences should be understood and appreciated, lest one become prejudiced against the light because of faults that exist simply in the mechancism, or the manner of utilizing the current.—*Northwestern Lumberman.*

TIMBER NEWS.

During the week ending 11th June, 1881, the undermentioned timber passed through the slides mentioned :—

DES JOACHIMS SLIDE.

Owners.	*Cribs.*	*Pieces.*
Bell & Hickey	113	3,350
Booth & Gordon	4	70
	117	3,420

COULONGE SLIDES.

Owners.	*Cribs.*	*Pieces.*	*Saw Logs.*
Alex. Fraser	114	2,782	7,215
Gillies Bros	88	2,789	66,374
	202	5,571	73,557

CALUMET SLIDES.

Rafts.	*Owners.*	*Cribs.*	*Pieces.*
1	McCool & Sunstrum	87	2,171
1	J. O. Latour	97	2,999
1	Gillies Bros	88	2,558
1	A. Fraser	114	2,782
2	McCoshen & Fraser	230	5,800
6		616	17,310

CHATS SLIDE.

Rafts.	*Owners.*	*Cribs.*
1	McCool & Sunstrum	87
1	Hilliard & Dickson	106
2		193

GATINEAU, FROM 10TH TO 15TH INST.

Owners.	*Saw Logs.*	*R'y Ties.*
G. B. Hall & Co	19,702	
W. C. Edwards & Co	8,400	
Hamilton Bros	2,871	
Gilmour & Co	3,002	
H. Harris	.....	3,367
	33,975	3,367

PORT HOPE.

The following is a statement of lumber, etc., shipped from Port Hope for the periods named, as obtained from the books of the Harbour Master, viz.:—

LUMBER.

April	3,697,276 feet
May	8,518,175 "
June, (to the 16th inclusive)	6,368,632 "
Total	18,584,083 "

SHINGLES.

April	.....
May	10,250,000
June, (to 16th inclusive)	2,712,750
Total	12,963,750

SHINGLE BOLTS.

April	80 cords.
May	198 "
June	...
Total	278 "

WOOD.

April	88 cords.
May	..
June, (to the 16th inclusive)	..
Total	88 "

THE OUTLOOK FOR LUMBER.

Mr. Van Schaick, of the extensive lumber firm of Ludington, Wells & Van Schaick, expresses the following opinion of the condition and prospects of the market. He is as well qualified to speak on the subject as any man in the country :—

"Seriously, to me the lumber market has all the elements of strength rather than weakness, and it has fully met the expectations held since January by many engaged in it. I would beg to suggest for your consideration the following elements of strength: First, a demand fully equal to that anticipated early in the season. With the fact that no switching of cars has been done for about two weeks past, the output from city yards by rail from January 1 to May 18 is but 143,594 feet less than during the same time last year, and all will admit that the city consumption has been greatly in excess for the same time. Second, that with largely increased receipts by rail over last year from January 1 to May 18 there remained at that date a deficiency in receipts of lumber of 22,352,000 feet as compared with 1880. Third, that it was generally admitted at the lunch given by Vice-President Martin, that the receipts of this year would be greatly in excess of last year, and might reach a total of 1,800,000,000 feet. As the count now stands, to receive an amount equal to last year only, there must arrive 1,360,000,000 feet. To receive this you have 182 business days including December 15, and arithmetic will show that each business day the receipts must be 7,500,000 feet to equal last year's receipts. Anything above this would be a surplus over last year.

"Every lumberman can form his own estimate as to what the excess will be, but in my judgment the excess in sales for 1881 will fully equal the excess of receipts over 1880 from this time forward. It is unnecessary to enlarge by stating that lake freights, wages and all expenses are likely to add fully $1 per thousand to the cost of manufacture over last year. No exact amount can be arrived at; still, this will be an important factor in the current market value of the year. An opinion formed and a position taken on the value of a commodity so largely produced and consumed as lumber, should be backed by arguments and facts, as care should be taken not to mislead dealers and consumers by opinions based on personal interests. My impression now is that since the rate of interest began to decline in western centers a few years since, all business men who have taken the bear side on the value of any commodity have been disappointed in results, and that it is extremely dangerous in the present prosperous condition of the country to sell any commodity at a low price in regular business that the seller must immediately replace. The stock of logs cut during the past winter is not excessive at any point, nor beyond the ability of the owners to carry easily. Money is abundant at an exceedingly low rate of interest compared with former years, the general business is prosperous in all departments, and the indications point to a steady and large consumption of lumber, Demand and supply will probably adjust prices to the satisfaction of manufacturer, dealer and consumer."—*Lumberman's Gazette.*

We have received No. 10, Vol. 1, of The Canada Lumberman, a 16 page semi-monthly paper hitherto published in Toronto by Mr. Alexander Begg, but which has just been purchased by Messrs. Toker & Carnegie, proprietors of the Peterborough Review, to whom we are indebted for the copy before us, and whom we wish every success in their new venture. The Canada Lumberman will be a trade organ, absolutely non-political, and will not only contain those accurate statistics which are necessary to the trade as a basis of intelligent operations, but will afford a medium through which the lumbermen of the Dominion may explain their wants and wishes or exchange ideas on subjects of interest to them. It is beautifully printed with new type on heavy white paper, contains a large amount of reading and is only $2 a year in advance.—*Fenelon Falls Gazette.*

The circulation of the Canada Lumberman is over 2,000 copies. Advertisers should note this

MR. MOORE REPLIED TO.

To the Editor of The Canada Lumberman:

Dear Sir,—Having noticed in the last issue of The Canada Lumberman a communication from W. Moore, in which he complains of the treatment received by the so-called, small mill-men, at the hands of Toronto planing mill men. I am pleased to observe, however, that he does not include retail men proper, in his denunciations. I would ask Mr. Moore if small mill-men are not somewhat in fault in this matter? Mr. Moore evidently included amongst the number. To the writer's own knowledge, it is generally the custom of small mill-men to come to Toronto with their lumber with the express intention of making all they can of it, and therefore cast the retailer, or middlemen, to one side, and seek out the sash and door factories, thinking that by disposing of their lumber to the consumers they will realize the outside figure for their lumber, or in other words, get the profits that should go to the middleman, and in this expectation they are often deceived, and many will say, rightly served. Now, although I wish it to be distinctly understood that it is not my purpose to attempt to defend the factory men, as I doubt not they are well able to defend themselves, still I think Mr. Moore will hardly deny that it is extremely difficult to convince many small mill-men as to what constitutes a mill cull, and more difficult still, as to what is really clear lumber, and as to what is well manufactured or the reverse, most difficult of all. Their knowledge in this respect is often exceedingly defficient, and considerable difficulty is often experienced by the purchaser in getting a satisfactory settlement in consequence. There is still another fault made by small mill-men, and that is in the handling and piling their lumber. Many lumbermen can testify that it is quite exceptional to find clear, bright and properly piled lumber at small mills, but frequently so damaged by sap-staining as to be unfit for market, and so depreciated in value nearly one-half. Now, I will agree with Mr. Moore, that in this respect matters might be improved to the advantage of seller and buyer, by establishing a depot under proper management, as such evils as that I have referred to above might be remedied under the influence exerted by an efficient manager, and I conceive that is about the only advantage that would be gained by the combination advocated by Mr. Moore, as he must be well aware that there are plenty of reliable dealers here to whom he could consign his lumber, and save his travelling expenses, and realize all the market would afford; and if Mr. Moore has clear, properly manufactured lumber at present to dispose of, he can net $28.00 per M., which is not a bad figure, even for small mill-men.

Truly yours,
H.C.

Toronto, June 16, 1881.

ENCOURAGING.

The receipt of such letters as the following, we need scarcely say, is most encouraging to the publishers of The Canada Lumberman. We have already received not a few of this kind, but there is room for more :

Fort Frances, N.W.T., June 6th, 1881.

Messrs. Toker & Co., Peterborough.

Gentlemen,—Enclosed, please find the sum of $2.00, for one year's subscription to The Canada Lumberman. I have received two copies of your paper, and find that it contains a great deal of very useful information to lumbermen.

Yours truly,
S. H. Fowler.

Collingwood, June 18, 1881.

Messrs. Toker & Co.,

Dear Sirs,—Having accidently seen The Canada Lumberman newspaper published by you, and being somewhat in that line of business, I am quite pleased with the amount of information to be found in your periodical and having reference to that line of business, and would desire to become a subscriber. Please send me a copy on receipt, and consider me a subscriber for a year.

Yours truly,
David Fleming.

Dyspepsia.—Strenthen your digestion—tone the stomach for utilizing and assimilating every atom of food you take; the body needs it for strength and vigor. *Zopesa* cleanses the entire system, stimulates the Liver, keeps you regular, and able to eat ten-penny nails. Letters and postal cards come in daily, telling of cures and help from *Zopesa*, from Brazil. *Positive proof* of the health and vigor it gives in a ten cent sample. Ask your druggist.

Chips.

OWING to the large amount of hemlock bark to be peeled in New Brunswick, operators are offering $1 and $1.10 for men, and even at these figures can scarce make up their crews.

THE daily average number of pieces (logs, ties, bolts, timber, &c.) passed through the gap at the western side of the boom at Belleville is 6,000, yet such is the extent of the supply from the river that but little diminution is noticeable in the bulk collected at the river's mouth.

LOGAN'S tannery, Pictou, N.S., has been rebuilt. The new building is 200x150 feet, and more convenient and commodious than the one which was burned down in 1875. It turns out at present about 1,000 sides of leather per week, and using some 7,000 tons of hemlock bark per annum.

THE *Railroad Gazette* of June 10th, reports 1,574 miles of new railroad built thus far this year, against 1,590 miles reported at the corresponding time in 1880, 661 miles in 1879, 413 miles in 1878, 570 miles in 1877, 628 miles in 1876, 296 miles in 1875, 537 miles in 1874, and 1,171 miles in 1873.

THERE are huge jams of logs on the Kennebec River, N.B. The drivers start them by blowing them up with powder. Thousands of spectators are watching the proceedings. A young fellow sitting on a rock looking on was struck by a log, knocked in and drowned, as was his companion who tried to save him, the other day.

A PARTY of New York capitalists were in Montreal last week making enquiries with the view of establishing a factory for the manufacture of Vegetable Fibres. The capitalists referred to are extensively engaged in the same business in New York, and it is believed by their acquaintances here that they intend starting a factory in this city.

THE Hart Emery Wheel Co., of Hamilton, have lately built a new factory on Hunter street, the size of which is 60x25, two storeys high, with a wing in the rear for engine house, etc., all built of red brick. They are full of orders, and report a largely increasing trade. The wheel made by this firm has a wire web inserted which largely diminishes the risk of the wheel bursting, as often happens with the ordinary wheels.

A COVINGTON, Va., paper notes the shipment from that point recently of a large lot of walnut timber, which will go *via* Richmond to Europe. The consignment amounted to 500,000 fect. A bill of 50,000 feet of white oak lumber was also sent from the same town lately to England and Scotland, where it is to be used in car building. Such transactions as these show that the valuable hardwoods to be found in this country are in demand abroad as well as at home.

ACCORDING to one of the Lewiston, Me., local papers the lumber business there is in a very flourishing condition. The two steam mills cut something over 100,000 feet per day, and the shipments from the yards connected with them amount to nearly fifty cars per week. The mill men are said to be receiving orders faster than they can fill them, and, in consequence of the activity in business, have advanced the price of clapboards from $20 to $30 per thousand feet. Most of the lumber shipped from Lewiston goes to Boston, Lawrence and other Massachusetts cities, being purchased by lumber dealers and building contractors.

An ingenious person has just hit upon a new and original derivation for the term "jerry," as applied to "jerry buildings," the work of dishonest or impecunious individuals engaged in the erection of house property. The derivation is so obvious that it seems a wonder nobody ever hit upon it before. This amazing philologist reminds us that "Joshua, the son of Nun, walked round Jericho in the old time and caused trumpets to be blown, whereupon the walls fell down with such facility that the builders must have been greatly blamed," and so their work became proverbial. A "Jericho builder," therefore, got to be a byword of reproach, and in the progress of ages the phrase has easily and naturally been corrupted into our modern term a "jerry builder."

THEY ALL DO IT.—Everybody uses "TEABERRY" for the teeth and breath, the newest, brightest, cosiest little toilet gem extant. Try a 5 cent sample.

TANNING WITHOUT TAN.

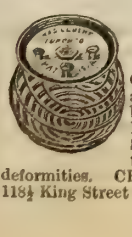
A company has lately been formed in Belgium for the purpose of working a new tanning process, invented by Dr. Heinzerling, of Frankfort, which has for its object to do away with all the drawbacks involved by the usual methods of tanning hides. The popular saying is that there is nothing like leather, but the making of it is more difficult than that of any other commodity in daily use. For several years past leather makers have found it difficult to meet the requirements of the leather sellers, owing to the increased consumption of the article, it became more and more difficult for the tanners to procure the necessary funds the figure of which rose in proportion to the constant rise in the price of tan, and then again, the immense amount of time it takes by the present process to make a skin into leather also over-handicapped the producers. All these difficulties are in a great measure overcome by the new system; so, at any rate, our contemporary *la Cote libre* tell us. Dr. Heinzerling tans leather without tan, that is to say without oak bark; using instead a mineral composition, by means of which he claims to work wonders. The company that has been formed in Belgium for the purpose of making leather according to his receipt, is to take over the works of M. Delattre Hallez, of Mons, whilst the remaining partners are to contribute 12,000*l.* towards the plant, fitting, and working. The tanning yard is already in full working order, customers are coming in in numbers, and those who have tried the new leather are all agreed that it is fully equal to the oak bark leather in quality, whilst its manufacturing price is very considerably lower. The new process only takes one hour, whilst the old require six hours, all other circumstances being equal. The promoters aver that the new leather will be a great commercial success.

The Willow.

Anybody who has the patience to wait five-and-twenty years for a large return upon a small expenditure should plant the willow tree. The demand for this wood during the last few years has been extraordinary, and the London dealers now readily wait upon any estate agent who has two or three fairly-grown willows for disposal. An average price for a good tree with plenty of top is £10. The wood is used for a variety of purposes. Boles just cut down, and free from disease and stain, are made into carriage bodies. Cricket-bats worthy of the name and the game are made of no other wood. It is the material also of many articles of modern furniture. The inferior parts of the tree serve for toys, for cotton or silk reels, or for conversion into charcoal. For many of the purposes we have named, the wood is first placed in scalding water, when it may be twisted, kneaded, cut, or stamped out, just like a piece of boiled cheese. Properly, of course, the willow should be grown upon the margin of a ditch or brook. It will grow more slowly and less perfectly in very moist and heavy soil. It should be planted in the spring or autumn. Those who want as rapid a development as the tree is capable of should not plant little sprigs, but a goodly-sized pollsrd lop, say from seven to nine feet long, and as thick as a man's wrist. If such a lop as this be placed three feet in the soil, failure is next to impossible.—*Land.*

The great Marvel of Healing—the grand climax of medicinal discoveries is Burdock Blood Bitters. It cures all diseases of the Blood, Liver, Stomach, Bowels, Skin and Kidneys, Female Complaints, Scrofula, General and Nervous Debility, and is a reliable Tonic in all broken down conditions of the system. Sample bottles 10 cents. Supplied by all dealers in medicine.

Hagyard's Pectoral Balsam is a purely vegetable healing balsam. It cures by loosening the phlegm and corrupt matter from the Lungs and expelling it from the system. Croup, Asthma, Bronchitis, Hoarseness and all pectoral diseases yield to it promptly. It costs 25 cents a bottle.



TRUSSES.

CLUTHE'S PATENT SPIRAL TRUSS all attachments improved. No more buckles, all on solid brass casting. Book on rupture and human frame free. Send address in full post card. Best true information about rupture and deformities. CHAS. CLUTHE, Surgical Machinist, 118½ King Street west, Toronto. 12L13

Department of the Interior,

OTTAWA, 25th May, 1881.

WHEREAS circumstances has rendered it expedient to effect certain changes in the policy of the Government respecting the administration of Dominion lands, public notice is hereby given:—

1. The Regulations of the 14th October, 1879, were rescinded by order of His Excellency the Governor General in Council, on the 20th day of May instant, and the following Regulations for the disposal of agricultural lands substituted therefor:

2. The even-numbered sections within the Canadian Pacific Railway Belt—that is to say, lying within 24 miles on each side of the line of the said Railway, excepting those which may be required for wood-lots in connection with settlers on prairie lands within the said belt, or which may be otherwise specially dealt with by the Governor in Council, shall be held exclusively for homesteads and pre-emptions. The odd-numbered sections within the said belt are Canadian Pacific Railway Lands, and can only be acquired from the Company.

3. The pre-emptions entered within the said belt of 24 miles on each side of the Canadian Pacific Railway, up to and including the 31st day of December next, shall be disposed of at the rate of $2.50 per acre; four-tenths of the purchase money, with interest on the latter at the rate of six per cent. per annum, to be paid at the end of three years from the date of entry, the remainder to be paid in six equal instalments annually from and after the said date, with interest at the rate above mentioned on such portions of the purchase money as may from time to time remain unpaid, to be paid with each instalment.

4. From and after the 31st day of December next, the price shall remain the same—that is $2.50 per acre—for pre-emptions within the said belt, or within the corresponding belt of any branch line of the said Railway, but shall be paid in one sum at the end of three years, or at such earlier period as the claimant may have acquired a title to his homestead quarter-section.

5. Dominion Lands, the property of the Government, within 24 miles of any projected line of railway recognized by the Minister of Railways, and of which he has given notice in the *Official Gazette* as being a projected line of Railway, shall be dealt with as to price and terms, as follows:—The pre-emptions shall be sold at the same price and on the same terms as fixed in the next preceding paragraph, and the odd-numbered sections shall be sold at $2.50 per acre, payable in cash.

6. In all townships open for sale and settlement within Manitoba or the North-West Territories, outside of the said Canadian Pacific Railway Belt, the even-numbered sections, except in the cases provided for in clause two of these Regulations, shall be held exclusively for homestead and pre-emption, and the odd-numbered sections for sale as public lands.

7. The lands described as public lands shall be sold at the uniform price of $2 per acre, cash, excepting in special cases where the Minister of the Interior, under the provisions of section 4 of the amendment to the Dominion Lands Act passed at the last session of Parliament, may deem it expedient to withdraw certain farming lands from ordinary sale and settlement, and put them up for sale at public auction to the highest bidder, in which event such lands shall be put up at upset price of $2 per acre.

8. Pre-emptions outside of the Canadian Pacific Railway Belt shall be sold at the uniform price of $2 per acre, to be paid in one sum at the end of three years from the date of entry, or at such earlier period as the claimant may acquire a title to his homestead quarter-section.

9. Exceptions shall be made to the provisions of clause 7, in so far as relates to lands in the Province of Manitoba or the North-West Territories, lying to the north of the belt containing the Pacific Railway lands, wherein a person being an actual settler on an odd-numbered section shall have the privilege of purchasing to the extent of 320 acres of such section, but no more, at the price of $1.25 per acre, cash; but no Patent shall be issued for such land until after three years of actual residence upon the same.

10. The price and terms of payment of odd-numbered sections and pre-emptions, above set forth, shall not apply to persons who have settled in any one of the several belts described in the said Regulations of the 14th October, 1879, hereby rescinded, but who have obtained entries for their lands, and who may establish a right to purchase such odd-numbered sections or pre-emptions, as the case may be, at the price and on the terms respectively fixed for the same by the said Regulations.

Timber for Settlers.

11. The system of wood lots in prairie townships shall be continued—that is to say, homestead settlers having no timber on their own lands, shall be permitted to purchase wood lots in area not exceeding 20 acres each, at a uniform rate of $5 per acre, to be paid in cash.

12. The provision in the next preceding paragraph shall apply also to settlers on prairie sections bought from the Canadian Pacific Railway Company, in cases where the only wood lands available have been laid out on even-numbered sections, provided the Railway Company agree to reciprocate where the only timber in the locality may be found on their lands.

13. With a view to encouraging settlement by cheapening the cost of building material, the Government reserves the right to grant licenses from time to time, under and in accordance with the provisions of the "Dominion Lands Act" to cut merchantable timber on any lands owned by it within surveyed townships; and settlement upon, or sale of any lands covered by such license, shall, for the time being, be subject to the operation of the same.

Sales of lands to Individuals or Corporations for Colonization.

14. In any case where a company or individual applys for lands to colonize, and is willing to expend capital to contribute towards the construction of facilities for communication between such lands and existing settlements, and the Government is satisfied of the good faith and ability of such company or individual to carry out such undertaking, the odd-numbered sections in the case of lands outside of the Canadian Pacific Railway Belt, or of the Belt of any branch line or lines of the same, may be sold to such company or individual at half price, or $1 per acre, in cash. In case the lands applied for be situated within the Canadian Pacific Railway Belt, the same principle shall apply so far as one half of each even-numbered section is concerned—that is to say, the one-half of each even-numbered section may be sold to the company or individual at the price of $1.25 per acre to be paid in cash. The company or individual will further be protected up to the extent of $500, with six per cent. interest thereon till paid, in the case of advances made to place families on homesteads, under the provisions of section 10 of the amendments to the Dominion Lands Acts hereinbefore mentioned.

15. In every such transaction, it shall be absolutely conditional:

(*a.*) That the company or individual, as the case may be, shall, in case of lands outside of the said Canadian Pacific Railway Belt, within three years of the date of the agreement with the Government, place two settlers on each of the odd-numbered sections, and also two on homesteads on each of the even-numbered sections embraced in the scheme of colonization.

(*b.*) That should the land applied for be situated within the Canadian Pacific Railway Belt, the company or individual shall, within three years of the date of the agreement with the Government, place two settlers on the half of each even numbered section purchased under the provision contained in paragraph 14, above, and also one settler upon each of the two quarter sections remaining available for homesteads in such section.

(*c*) That on the promoters failing within the period fixed, to place the prescribed number of settlers, the Governor in Council may cancel the sale and the privilege of colonization, and resume possession of the lands not settled, or charge the full price of $2 per acre, or $2.50 per acre, as the case may be, for such lands, as may be deemed expedient.

(*d.*) That it be distinctly understood that this policy shall not only apply to schemes for colonization of the public lands by Emigrants from Great Britain or the European Continent.

Pasturage Lands.

16. The policy set forth as follows shall govern applications for lands for grazing purposes, and previous to entertaining any application, the Minister of the Interior shall satisfy himself of the good faith and ability of the applicant to carry out the undertaking involved in such application.

17. From time to time, as may be deemed expedient, leases of such Townships, or portions of Townships, as may be available for grazing purposes, shall be put up at auction at an upset price to be fixed by the Minister of the Interior, and sold to the highest bidder—the premium for such leases to be paid in cash at the time of the sale.

18. Such leases shall be for a period of twenty-one years, and in accordance otherwise with the provisions of section eight of the Amendment to the Dominion Lands Act passed at the last Session of Parliament, hereinbefore mentioned.

19. In all cases the area included in a lease shall be in proportion to the quantity of the live stock kept thereon, at the rate of ten acres of land to one head of stock; and the failure in any case of the lessee to place the requisite stock upon the land within three years from the granting of the lease, or in subsequently maintaining the proper ratio of stock to the area of the leasehold, shall justify the Governor in Council in cancelling such lease, or in diminishing proportionately the area contained therein.

20. On placing the required proportion of stock within the limits of the leasehold, the lessee shall have the privilege of purchasing, and receiving a patent for, a quantity of land covered by such lesse, on which to construct the buildings necessary in connection therewith, not to exceed five per cent. of the area of the leasehold, which latter shall in no single case exceed 100,000 acres,

21. The rental for a leasehold shall in all cases be at the rate of $10 per annum for each thousand acres included therein, and the price of the land which may be purchased for the cattle station referred to in the next preceding paragraph, shall be $1.25 per acre, payable in cash.

Payments for Lands.

22. Payments for public lands and also for pre-emptions made in cash, or in scrip, or in police or military bounty warrants, at the option of the purchaser.

23. The above provisions shall not apply to lands valuable for town plots, or to coal or other mineral lands, or to stone or marble quarries, or to lands having water power thereon; and further shall not, of course, affect Sections 11 and 29 in each Township, which are public school lands, or sections 8 and 26, which are Hudson's Bay Company's lands.

J. S. DENNIS,
Deputy Minister of the Interior.

LINDSAY RUSSELL,
Surveyor-General. 3L17

A. L. UNDERWOOD

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☞P.S.—Also on hand 120 M dry Oak 2 to 4 inches thick, will be sold cheap to close it out. 1yL16

Market Reports.

TORONTO.

From Our Own Correspondent.

TORONTO, June 26.—There is nothing specially new in regard to the lumber trade in this city. Building still keeps active, and the first batch started in the early spring are nearly completed and the foundations for a large number more are now being laid. More especially does the adjoining municipality of Parkdale present a scene of activity in the building line, which would well repay a visit from persons at a distance who felt interested in the onward march of improvement.

Five years ago that which is now called the village of Parkdale, was only a farm, called the Col. O'Hara farm, now it numbers about two thousand inhabitants, and still rapidly increasing in numbers, and a large number of the houses erected there would do credit to any city in the Dominion.

An extensive system of drainage has also been begun, at which a large number of baborers are now engaged, so that altogether a busy sight is now presented in this village. There are three lumber yards in and adjoining the village, and two planing mills with sash and door factories combined, all of which are well taxed to meet the demand of this municipality alone.

One noticeable feature in the trade here at present is the extreme scarcity of shingles, the demand for which is far in excess of the supply; this may be accounted for, not only by the unusual demands for the local trade, but the demands of our western trade also, which, since the building of the H. & N.W. R.R., has been constantly growing, so that large quantities of lumber and shingles are diverted from their coarse at Barrie, to points as far west as London and Sarnia, and so far as I can learn, command better prices than that obtained here.

The want of cars is being felt severely here at present, but the R.R. Company are striving to meet the demand so far as lies in their power, and this want of sufficient rolling stock will doubtless be felt for some weeks yet to come, In consequence of the lack of lumber for shipment at this port, from causes before named, many vessels have deserted this harbor for other ports where freights are more easily obtainable, and former rates for lumber to Oswego are fairly maintained.

The views expressed in my former letter as to the advance in prices on common lumber being adhered to, already appear likely to be verified, and my firm convictions are, that as soon as lumber flats become more plentiful, prices will level down to about their former figures, on all the coarser grades of lumber; on the upper grades present prices will likely be fully maintained to the close of the season. If we could only succeed in obtaining a reduction of the duties on common lumber to one dollar per M., it would materially help matters, but so long as the present duties on the coarser grades of lumber are levied, a large amount of such lumber must be placed upon the home market, and low prices rule as a consequence.

Receipts of lumber here per N. R. R. are exceedingly small, owing to the change of gauge having only been completed as far south as Allandale, so that all lumber shipped north of that place for this city must be transhipped in order to reach here, and there is no lumber of any consequence this side of Allandale except that owned by Thompson, Smith & Son, therefore the receipts for shipment and the local trade is very meagre at present. Owing to the want of unity amongst the retailers, as mentioned in my last letter, prices keep fluctuating, each dealer watching the other for fear of being undersold in the market, and yet plenty for all to do, and a fair remuneration upon all sales made might as well be had as not. To show to what degree this feeling is carried, it is only requisite to notice the shingle trade as it exists at present. Manufacturers are demanding $2.10 per M. at the mills for XXX shingles, freight to Toronto 25c. per M. and cartage from cars to the yards 5c., so that the net cost to the retailer is $2.40, and the dealer retails them at $2.50 and requently the builders' paper taken at 90 days, and sight drafts accepted from the manufacturer. A more suicidal way of doing business in this one particular could hardly be imagined. The lath trade also is cut about as close as the shingle trade, and all for the same reasons, which is tantamount to saying we would rather do a trade for nothing than let our neighbor gain any advantage over us, and the sooner this state of things is abolished the better for the retailers' pocket. The shingle manufacturer demands all the state of the market warrants, and has, during the last six months, steadily advanced his prices from $1.80 at the mill to $2.10, the present quotation, and yet the yard-men sell at precisely the same figures.

The demand for cherry lumber in this market is much in excess of the supply, and good timber, especially if cut into 5×5, 6×6, 8×8, and 10×10 in., will bring good prices; the same remarks will apply to butternut cut into 1 in., 1½ in., 2-in. and 3-in. There is also a good demand for white and black ash lumber at fair figures.

Prices at the yards rule as follows:—

Mill cull boards and scantling	$ 9 00
Shipping cull boards, promiscous widths	11 00
" " 10 and 12 in. stocks	12 00
Scantling and joist, up to 16 ft	$11 50
" " " 18 ft	12 00
" " " 20 ft	12 50
" " " 22 ft	13 00
" " " 24 ft	13 50
" " " 26 ft	14 50
" " " 28 ft	15 50
" " " 30 ft	17 00
" " " 32 ft	18 00
" " " 34 ft	20 00
" " " 36 ft	22 00
" " " 38 ft	25 00
" " " 40 to 44 ft	30 00
Cutting up plank and boards	16 00
Sound dressing stocks	15 00
Picks Am. inspection	24 00
Three uppers, Am. inspection	32 00
1½-inch dressed flooring	28 00
1¼ " " "	24 00
1 " " "	20 00
XXX sawn shingles, ₱ M	2 50
Lath	1 55

OSWEGO, N.Y.

From Our Own Correspondent.

OSWEGO, June 24, 1881.—The demand for good lumber has been quite slack for the past two weeks, and there seems a disposition amongst some of the dealers to accept lower prices on uppers. Good mill run lots, however, are still in demand, and selling at prices quoted. The stock of dry lumber is ample for the present. The new cut is now arriving quite freely, and the yards will soon have a surplus of green lumber, which must be dried out some before it will be fit for the market; a calm time is now looked for until after harvest. Shingles are in good demand, the wet weather having caused dealers to anticipate an increased consumption; prices are still strong at the quotations, but no probability of any advance.

Lake freights from north shore ports, 90c. Canal, $1.60 to Albany and $2.20 to New York.

Shipments east to interior are quite light.

Receipts to date:—

1880	63,000,000
1881	50,000,000

Quotations are as follows:—

Three uppers	$42 00@45 00
Pickings	32 00@35 00
Fine, common and dressing	20 00@25 00
Common	14 00@16 00
Culls	11 00@13 00
Mill run lots	17 00@22 00
Sidings, selected, 1, 1½ inch	30 00@37 00
Mill run, 1x10, 12 in	16 00@21 00
Selected	20 00@25 00
Strips, 1 and 1½ inch mill run	14 00@18 00
" " " culls	10 00@13 00
1x6 selected for clapboards	25 00@35 00
Shingles, XXX, 18 inch, pine	3 75@ 0 00
XX, " "	2 75@ 0 00
XXX, 18 inch, cedar	3 00@ 3 00
XX, " "	2 25@ 2 25
Lath	1 40@ 1 40

SAGINAW VALLEY.

BAY CITY, Mich., June 21, 1881.—The *Lumman's Gazette* says the market continues active and prices steady and unchanged. Sales have been less numerous, the spring rush being about over. Another cause has operated to decrease the number of sales, and that is, the large amount of lumber on the river already sold, which is estimated as amounting to a quantity greater than can be sent forward in a full month. The figures are stated at 165,000,000 feet. That there should be a letting up in pur chases under the circumstances is not remark able. Still we hear of sales at market rates of lumber yet in the log. When stock is disposed of in this manner it is a sure indication of a firm market and unusual confidence in the situation remaining favorable for some time to come.

Shingles are in active demand with less than enough offering to supply the market. Prices are firm at the following quotations: Country brands $1.85@2.00 for clear butts and $2.85@3.00 for XXX; river brands $2.00@2.10 for clear butts and $3.00@3.15 for XXX.

Hoops are wanted at $3.30@3.25.

The shipments of forest products from Bay City by water for the week ending June 18th and for the season to same date were as follows:

BAY CITY—THE WEEK.

Lumber, feet	20,227,432
Hoops	1,719,000
Shingles	860,000
Lath	420,000
Staves	205,000
Timber, feet	24,000

FOR THE SEASON.

Lumber, feet	126,331,269
Shingles	16,371,000
Lath	3,258,000
Hoops	4,250,600
Staves	537,081
Shooks	104,000
Railroad ties	15,500
Cedar posts	1,847
Timber, feet	45,000

The shipments at Saginaw for the week were:

Lumber	8,786,000
Shingles	2,200,000
Lath	200,000

TOTAL FROM THE RIVER.

The total shipment of lumber, lath and shingles from the river to date, with comparisons, is as follows:

	1880.	1881.
Lumber	211,650,362	164,839,206
Shingles	35,320,000	31,558,600
Lath	12,969,650	2,746,000

Freights remain steady and unchanged at $2.50@2.75 to Ohio ports and $3.00@3.25 to Buffalo and Tonawanda, the outside figures being from up-river points.

General quotations here are:—

Shipping culls	$ 6 00@ 8 00
Common	12 00@16 00
Three uppers	30 00@36 00

RAILROAD FREIGHTS.

The following are the present railroad freight tariffs from the Saginaw Valley to principal points, for 10 tons, as reported by Mr. O. Waters, Commercial Agent M.C.R.R.:

Albany, N.Y	$52 00
Burlington, Vt	84 00
Buffalo, N.Y	33 00
Boston, Mass	68 00
New York City	58 00
New Haven, Ct	68 00
Portland, Me	68 00
Rochester, N.Y	43 00
Rome, N.Y	55 00
Syracuse, N.Y	53 00
Springfield, Mass	68 00
Schenectady, N.Y	52 00
Utica, N.X	56 00
Worcester, Mass	68 00

NEW YORK.

We still notice an absence of anything in the way of extravagant views or an inclination to talk "boom," but there is a well preserved tone of quiet confidence which carries strong conviction to searchers after information. In short, while receivers, dealers, &c., have really nothing positively new to report this week, they reiterate the former cheerful statements regarding the present and prospective condition of the market with such unanimous voice as to leave no room to doubt the healthy state of trade. Irregularities crop out occasionally as a natural result of any large business, and shrewd or lucky buyers will gain some advantage, but the changes are slight and generally only temporary, more especially on first-class goods, of which a scarcity prevails in all grades of lumber. The distribution of supplies is general, including building, manufacturing, domestic shipment and export, and the accumulation in hand said to be smaller than usual for this season of the year.

Spruce of good quality can find an outlet for all manufacturers appear ready to offer, and no very heavy concession on price would be necessary, except under an unusual liberal accumulation of cargoes. Shippers, however, who send in all sorts of cuts and assortments, with the schedules containing a large percentage of inferior stuff, and expect to find buyers ready to grab the offering as soon as made, will be sadly disappointed.

White pine has accumulated to some extent, but the amount is not sufficient to have the least influence upon the position of the market, indeed could be materially increased before attracting much attention.

Yellow pine does not vary greatly from the position noted last week. The pressure upon the mills has been somewhat relieved through the "catching up," on many of the heavier contracts, and all have more or less business on hand, and agents are in constant receipt of a fair run of new orders.

Hardwoods are firmly sustained and in good demand. Indeed buyers are more anxious if anything, and some who early in the season refused to submit to the rates asked on walnut now seem to regret their action, though the regret comes too late to secure much stock.

Shingles sell readily on most home outlets and at full rates with the supply not very abundant.

ALBANY.

We have not any change to note in our quotations for pine lumber; the market is firmly held with a steady business. The quantity of lumber moving from the district, from the river and canal sides, is about up to the average. Philadelphia was represented among the buyers in this district. The large and general consumption of lumber throughout the country gives much firmness to the market here and the confident expectation of high prices in the near future, especially for best grades. The Michigan and Canadian markets are very strong.

Hardwoods are steadily held with a good business.

Coarse lumber is in good demand at quotations, which are very firmly held; the Northern mills are without their needed supply of water; the condition of the Hudson river here shows how light the fall of rain has been on the upper branches of that stream.

The receipts of lumber by lake at Buffalo for the week ending June 20th, were 7,248,000 feet and by rail 110 cars.

The receipts by canal at Albany from the opening of navigation to June 15th were:

	Boards and Scantling, ft.	*Shingles, M.*	*Timber, cub. ft.*	*Staves, lb.*
1881	59,948,000	48	.....	459,000
1880	85,978,400	100	.....	.....

Freights from Oswego to Albany, $1.60@1.65. From Ottawa to Albany, by boats, $3.00@3.50 ₱ M. feet.—*Albany Argus.*

River freights are:—

To New York, ₱ M ft	$ @1 00
To Bridgeport	@1 37½
To New Haven	@1 37½
To Providence, Fall River and Newport	2 00@2 25
To Pawtucket	2 25@2 50
To Norwalk	1 25@1 30
To Hartford	@2 00
To Norwich	@2 00
To Middletown	@1 75
To New London	@1 75
To Philadelphia	@2 00

Quotations at the yards are as follows:—

Pine, clear, ₱ M	$50 00@60 00
Pine, fourths	45 00@55 00
Pine, selects	40 00@50 00
Pine, good box	14 00@28 00
Pine, 10-in. plank, each	00 38@00 42
Pine, 10-in. plank, culls, each	00 20@00 22
Pine boards, 10-in	25 00@27 00
Pine, 10-in. boards, culls	17 00@18 00
Pine, 10-in. boards, 16 ft., ₱ M	25 00@30 00
Pine, 12-in. boards, 16 ft	25 00@30 00
Pine, 12-in. boards, 13 ft	26 00@28 00
Pine, 1¼ in. siding, select	38 00@40 00
Pine, 1¼-in. siding, common	15 00@18 00
Pine, 1-in. siding, select	38 00@40 00
Pine, inch siding, common	15 00@18 00
Spruce, boards, each	00 15@00 15
Spruce, plonk, 1½-in., each	00 18@00 19
Spruce, plank, 2-in., each	00 28@00 28
Spruce, wall strips, each	00 11@00 12
Hemlock, boards, each	00 13@00 00
Hemlock, joist, 4x6, each	00 31@00 31
Hemlock, joist, 2½x4, each	00 13@00 13
Hemlock, wall strips, 2x4, each	00 10@00 10
Ash, good, ₱ M	38 00@45 00
Ash, second quality, ₱ M	25 00@30 00
Cherry, good, ₱ M	60 00@70 00
Cherry, common, ₱ M	25 00@35 00
Oak, good, ₱ M	38 00@45 00
Oak, second quality, ₱ M	20 00@25 00
Basswood, ₱ M	25 00@28 00
Hickory, ₱ M	36 00@40 00
Maple, Canada, ₱ M	26 00@30 00
Chestnut, ₱ M	35 00@40 00
Shingles, shaved, pine, ₱ M	6 00@00 00
" 2nd quality	4 50@00 00
" extra, sawed, pine	4 20@04 25
" clear, "	3 25@00 00
" cedar, mixed	3 00@00 00
" cedar, XXX	3 75@00 00
" hemlock	2 25@00 00
Lath, hemlock, ₱ M	1 50@00 00
Lath, spruce, "	1 75@00 00
Lath, pine, "	2 00@00 00

RECEIPTS AND SHIPMENTS AT OSWEGO.

According to the Oswego *Palladium* the receipts and shipments of lumber, shingles, etc., during the fortnight ending and including Friday the 24th June, foots up as follows:—

	Receipts.	*Shipments.*
Lumber	13,287,443	12,875,058
Shingles	2,177,000	324,000
Lath	1,872,200	792,000
Posts	8,430	382,000

CHICAGO.

CHICAGO, June 22, 1881.—There has been a larger supply of lumber at the docks this week, but, though it moved rather slowly at first, at this writing is about all sold. The commission men claim that it sells readily, and attribute the slowness of the market the early part of the week to the fact that the yard docks were so well filled that there were few buyers who could find room for any more vessels.

There are some country buyers on the market, but they do not take many of the cargoes, owing, it is said, to the difficulty they have in getting transportation for them. Sales are therefore mostly on local account, though some lumber goes direct from the dock to points in this State, *via* the canal. The city dealers buy freely when they are able to give the vessel a dock.

The market appeared a shade weaker in respect to prices on Monday, but we have not learned of any sales below last week's quotations, and this morning the market is as firm as it has been. Inferior piece stuff brings $10, and standard is said by some to be quotable at $10.50, but there seems to be considerable doubt about this. Probably anything of ordinary length would not sell above $10.25, though an admixture of longer lengths would easily raise the price. We think $10@10.25 is as fair a quotation as could be made. Inch lumber is steady, and without quotable change in price. Good lumber is in demand, and choice cargoes, which are occasionally offered, sell easily on their merits, Shingles are quoted higher this week than they have previously been, standards selling at $2.55@2.60, and extra A's at $2.70@2.75. One exceptionally good cargo was held at $2.80, and we believe has been placed at that figure. Lath are without change.

There is some fear among buyers that an advance in yard prices at the meeting to be held on Monday will be followed by a similar change at the dock, but some of the commission men seem to be of a different opinion. They look for a rather quiet market for a couple of weeks, and regard an attempt to raise the present figures as inadvisable.

Freights are easier, but not so much so as to produce a definite change in rates. Shippers offered lower rates to-day, but we understand no vessel could be found to accept them, and we know of several parties who were obliged to pay the old figure.

Receipts and shipments of lumber and shingles for the week ending June 21:

CARGO QUOTATIONS:

Joist and scantling, green	$10 00@10 25
Mill run, choice green	16 50@21 00
Mill run, medium, green	12 50@16 50
Mill run, common, "	11 00@13 50
Shingles, standard	2 55@2 60
Shingles, extra A	2 70@2 75
Lath	1 60@1 75

LAKE FREIGHTS.

Manistee	$2 25
Muskegon	1 75
Ludington	2 00
Grand Haven	1 75
Menominee	2 25
Sturgeon Bay	2 25
White Lake	1 87½
Ford River	2 12½

	Receipts.		*Shipments.*	
	Lumber.	*Shingles.*	*Lumber.*	*Shingles.*
1881	70,830,000	33,302,000	27,003,000	4,576,000
1880	34,256,000	16,703,000	17,924,000	2,000,000

Receipts and shipments of lumber and shingles from January 1 to and including June 21:

	Receipts.		*Shipments.*	
	Lumber.	*Shingles.*	*Lumber.*	*Shingles.*
1881	505,171,000	219,401,000	327,059,000	57,178,000
1880	431,220,000	213,895,000	277,613,000	43,243,000

There is no doubt but that a majority of the yard men are having all the business they want to do. Many of them are free to admit that they do not solicit trade, have called home their travelling men, and cannot properly attend to their mail orders. Some of them are a month behind with their shipments, owing largely to the amount they have to get off, and in some cases, to a certain extent to the difficulty they have in picking up the amount and kinds required. Country dealers with whom we have talked say they never saw the dealers here so indifferent about making sales.

The figures presented above show that the week in the district has been a busy one. The shipments were 27,000,000 feet against 26,000,000 last week, and 17,000,000 for the corresponding week of last year. Heavy as these shipments are, our best advices show that, except in some of the larger towns, yards are not as yet being stocked, from which it is naturally deduced that there will be a still heavier trade later on in the season.

It may be said now that every dealer is selling up to the Exchange list, so far as they are able to do so. There are several dealers who have advanced prices, and have sent out lists to that effect. The ones we have seen quote inch and two-inch rough and dressed lumber fifty cents higher; scantling, 2x12 joist and timber, $1; siding and ⅜-ceiling twenty-five cents, and all grades of shingles fifteen cents.—*Northwestern Lumberman.*

COMMON BOARDS—ROUGH.

	Dry.
Common boards, 12 in.	$15 50
10 and 20 ft	14 50
12, 14, 16 and 18 ft	13 50
Culls, all lengths	11 50
1¼ and 1½ com	13 50

TIMBER AND DIMENSION—DRY.

Small timber, 18 ft. and under	$12 00
12, 14, 16 and 18 ft. joist	13 00
2x4, 10 and 20 ft	14 00
2x4, 18 ft	13 00
20 feet	14 00
22 feet	17 00
24 feet	17 00
26 feet	20 00
28 feet	20 00
30 feet	20 00
2 in. cull plank, all widths	9 00
2x4 culls, all lengths,	9 50

BOSTON.

The *Journal of Commerce* of June the 25th says: The market continues very firm. Western lumber is fairly active, with dealers stong. Southern and Canada pine are in fair supply, with holders firm. Hardwoods are in good demand and scarce.

CANADA PINE.

Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
do do 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

TONAWANDA.

The *Northwestern Lumberman* says that trade is moderately active as regards sales, which are made at firm prices. Rrceipts are quite heavy for the past week, footing up 24,065,000 feet of pine, which is the largest amount yet reported this season. There is no change in lake frieghts. Canal frieghts to Albany and New York remain as at last report, $2.15 and $2.75 respectively. There has been no change in prices, either of lumber or shingles. The present condition of the market here very much affects sales, as dealers in the interior do not seem inclined to stock up very heavily at present rates.

An important business change has been effected here during the past week. The extensive lumber business of the late firm of McGraw & Co., and more recently of the late Ira S. Bennett, has been purchased by the Export Lumber Company (limited), of 87 Wall street, New York. It has a capital of $150,000, and is a large institution, doing mostly an export business, as its name indicates. The concern has bonded yards at Hunter's Point, Long Island, and Hochelaga dock, Montreal, in addition to its New York branches and its fine property in Tonawanda. The yards here will be stocked up at once with the product of western mills. The local manager, Mr. Mackintosh, arrived this morning, and has assumed control. The market quotations are as follows:—

CARGO LOTS—MICHIGAN INSPECTION.

Three uppers	$38 00@43 00
Common	17 50@20 00
Culls	11 50@12 50

MINNEAPOLIS.

The *Lumberman and Manufacturer* of June 23rd says that taking into account the supply, demand and prices, the lumber trade was never in a more satisfactory condition than it is now in the west. The volume of business seems to to be increasing daily and the tendency is toward better prices on all standard goods. There are some manifest discrepancies which should be adjusted, for instance, when common logs are worth $10@11 at Stillwater and ordinary mill run lumber in rafts bring $15@16, yard prices for first common boards and dimension should not stand at $12@13, nor 26 foot heavy stuff at $18.

The fight at Chicago over prices is keeping the bulk of the lumber away from the auction docks and sends it to the yards or keeps it at the mills. So far there has been no material break there from spring prices. The manufacturers are talking up an advance and a few have issued new lists 50 cents better.

St. Louis is selling more lumber than ever before, the trade now reaches nearly 10,000,000 feet per week. Some of the leading houses have been forced to Michigan and Chicago for dry sorts to fill up the yards, and prices are very firm. Heavy winds and storms during the last two weeks has kept back rafts and made receipts light.

There is now all over this region a strong disposition to advance prices from $1 to $2.

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HEAD OFFICE, 9 VICTORIA STREET, TORONTO.

SIR ALEX. CAMPBELL, President. GEORGE C. ROBB, Chief Engineer.
HON. JNO. McMURRICH, Vice-Pres. A. J. JONES, Secretary-Treasurer. 1yL17

LIVERPOOL.

The business of this port has been for the past week very limited, and has shown a marked decrease from the preceding portion of the month. Much of the large consumption and the busy aspect of affairs is attributable to the fact of large purchases being made by public companies in addition to the auction sales, and the forwarding of these goods alone is enough to give a lively appearance to the quays and wharves. Reading the quantities shipped during the past month in comparison with those of last year at the same time, the business done appears in a very favourable light, but when it is considered that much of it is the result of auction sales and of large orders from public companies, and taken also in conjunction with the fact that the stocks on hand are most excessive, it may be at once concluded that the present condition of the timber trade here is not what it ought to be.

The *Timber Trades Journal* of June 11th, says: There is no change to report in prices, either in retail or wholesale transactions. Freights from St. John, N.B., are low, and several steamers have been chartered for spruce deals, although only two are reported as coming to Liverpool.

These goods form nearly the only exception in the list given in our last, in which the stocks of this year are so greatly in excess of last year at this time, the quantities on hand being only 1,000 standards in excess, and there is a growing feeling that the prices now ruling are probably the lowest that will be touched; but, of course, much will depend upon the extent of the import.

GLASGOW.

The arrivals to Clyde ports for the week of American timber and parcels from Sweden and Norway amount to say 1,900 loads sawn and 1,630 loads hewn, consisting chiefly of pitch pine, with sundry parcels of deals and battens, &c.

The public sale held at Greenock on the 31st ult., was well attended, and a considerable quantity of wood of various descriptions was disposed of at fair rates.

During the past month the tonnage launched on the Clyde reached a high total, viz., 28 vessels, with an aggregate of 36,500 tons. For the previous month (April) the returns amounted to 30,000 tons, whilst since 1874 the largest figure for May has been 21,000 tons (in 1879). There is still a large amount of work on hand, and a few good orders were booked during the month.

With regard to housebuilding it may be observed that, although there is still a marked quietness in the city, some of the neighbouring towns and villages, especially districts having close railway connection, are fairly busy, and the wages of house joiners in these places are advancing.

The *Timber Trades Journal* of the 11th ult., says: The imports for the week have been three cargoes of pitch pine timber and a miscellaneous assortment of various woods per steamships, comprising several superior parcels of 1st quality broad pine deals from Quebec (Messrs. Edmiston & Mitchells, consignees,) and sundry lots of walnut, wainscot, and whitewood logs, and oak planks and staves, by the New York and Baltimore steam-liners. The imports at Grangemouth, from Norway and the Baltic ports, have been comparatively light as yet.

There has been no public sale here of the new arrivals of Quebec pine deals, but it is understood one is to be held next week, result of which will be duly reported.

Messrs. Singleton, Dunn & Co.'s Glasgow circular of June 9th says: Business continues languid, and prospects are far from encouraging. Although shipbuilding is brisk, the demand for timber for that trade is light, owing to purchases on an extensive scale having been made when contracts for ships were negotiated. Housebuilding and other industries are depressed, and, in consequence, the demand for timber suitable for their requirements is limited. North of Europe goods are not so firm; indeed, are distinctly lower in price, with a tendency to decline more. We trust that shipments of all kinds of Canadian wood goods will be restricted, as in the aspect of affairs just stated, it would be most injudicious to seriously augment the too large stock now being carried over. Auction sales during the last two months were only moderately successful.

MISCELLANEOUS.

AT Muskegon on the 11th June, the Torrent & Arms Lumber Company sold 4,000,000 feet of lumber, half at $15.75 and half at $9 per 1,000 D. A. Blodgett sold 1,000,000 feet piece-stuff at $8 per 1,000 feet on the dock.

IT is stated that the English capitalists who had proposed to buy out the Guelph Lumber Company for $1,000,000, have decided to back out from the enterprise after receiving reports from their experts.

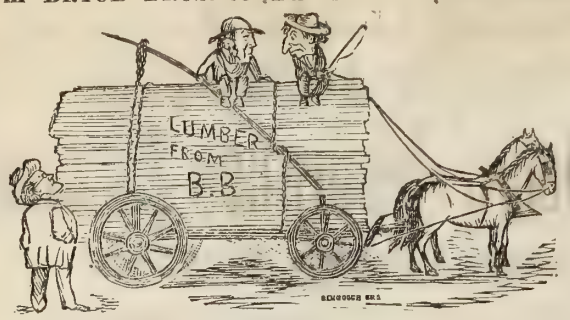
MESSRS. CLINCH & SONS, Point Wolf, N.B., are getting a new engine for their mill. It is constructed by Waring, St. John, and has some new features in its construction. Since the recent rains, this firm has about seven million feet of logs in their pond.

ON Friday the 17th June, in Mr. William Tait's mill, Gravenhurst, while the saw was running free, and the guide about to be adjusted, both the saw pulley and the tightener pulley burst, a large piece of metal striking David Bone, jr., of Oro, in the neck, throwing him a distance of twelve feet, and instantly killing him. Another piece of the pulley, flying in an opposite direction, slightly wounded Thomas Donaldson on the arm and head. At the time of the accident the saw was not running at even ordinary speed, and but an instant before the pulleys were running true and smoothly, every precaution being taken by Mr. Tait, who was absent at the time, to ensure strength and prevent accidents. The deceased was much liked by those who knew him, and his funeral, which took place on Sunday, was largely attended.

BRYCE BROTHERS

Lumber from BRYCE BROS. to Build the Canada Pacific Railway!

Office and Yard: Cor. Berkeley & Front Sts. **TORONTO.**



Saw Mills: Elmvale, Ontario.

Planing Mill: 57 Ontario Street

BLAKE—"It looks like good, clear stuff. It strikes me it is about the only clear thing in the whole business."

LUMBER MERCHANTS. 6L12

OAK HALL

Nos. 115, 117, 119, 121, King St. East, Toronto.

We are the most Extensive CLOTHIERS in Canada.

We carry a STOCK of FIFTY THOUSAND DOLLARS to choose from.

We watch the interest of our Customers. Our stock is FULL of the very best goods in Scotch, English and Canadian Tweeds.

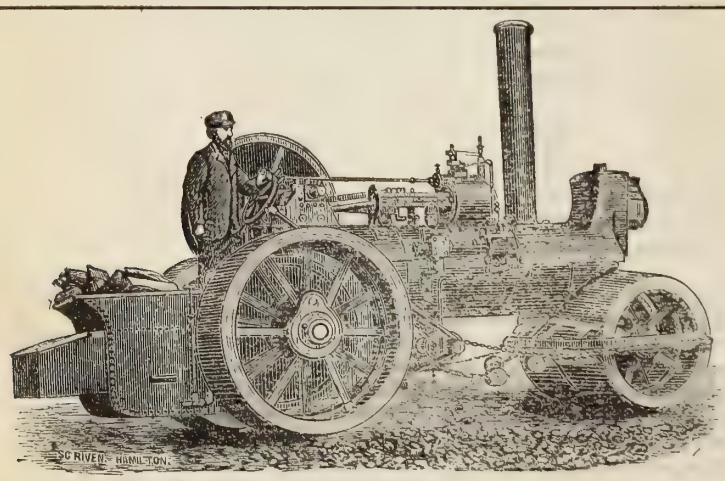
We BUY and SELL for Cash, therefore it enables us to do business on very SMALL PROFITS.

NOTE THE PRICES.

We give a Good Tweed Suit for.....$6 00
We give a Good Tweed Pants for..... 1 50
We give a Good Overalls for 0 35

LUMBERMEN!

When you visit Toronto, come direct to OAK HALL, and fit yourselves out with a Good Suit. Remember the address:—OAK HALL, the Great One Price Clothing House, Toronto, opposite St. Jame's Cathedral. 1yL13



MONA IRON WORKS

HAMILTON, ONT.

J. H. KILLEY & Co.

Manufacturers of Economical, Variable, Cut-off, High Pressure, and

Condensing Engines

Patent Circulating and Self-Cleansing Boilers, Improved Feed Water Heaters and Patent Steam Blast Apparatus for Improving Draft and Economizing Fuel,

First-class Grist & Saw Mill Engines and Machinery

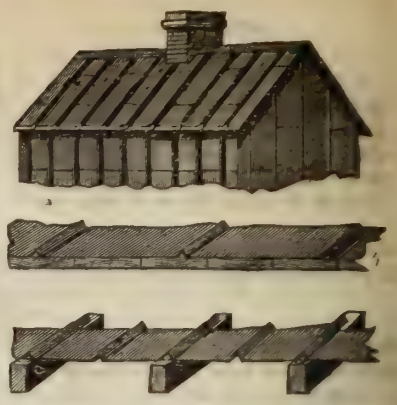
STEAM ROAD ROLLERS and STONE BREAKERS. 6L12 b27

The Largest Manufacturers of

SHEET IRON ROOFING

IN THE UNITED STATES.

Can give the Best of References in every State and Territory.



POTTER IRON ROOFING COMP'Y,

101, 103 and 105 West Front Street,
CINCINNATI.

All Kinds of CORRUGATED IRON Furnished.

Send for Illustrated Circulars, naming THE CANADA LUMBERMAN. 12L11

The Rainer Piano Always Triumphant!

CARRIES OFF THE HONORS OF 1880 AS FOLLOWS:

At Toronto Industrial Exhibition, 1st Prize, Diploma & Medal for Best Square Piano
At Hamilton Provincial Exhibition - - - - 1st Prize and Diploma
At Brantford Southern Fair - - - - - 1st Prize and Diploma
At Guelph Central Exhibition - - - - - 1st Prize and Diploma

SEND FOR CATALOGUE.

RAINER, SWEETNAM & HAZELTON,

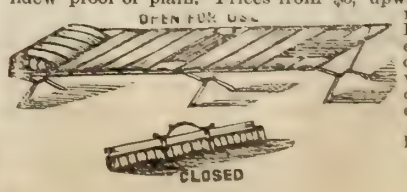
MANUFACTURERS,

GUELPH, ONTARIO. 1l4

National Manufacturing Company

202 SPARKS STREET, OTTAWA.

anufacturers of Tents for Lumbermen, Sportsmen, Camp Meetings, Photographers, Lawn and ilitary Encampments, with or without extra roofs, all sizes and styles, white or fancy striped, ildew proof or plain. Prices from $5, upwards. Flags of all descriptions, (regulation sizes) made of the best of silk-finish bunting. CAMP BEDS (Bradley's Patent) the best bed ever invented; size when folded 2 x 6 in.; 3 feet long, weighing only 11 pounds, but strong enough to bear the weight of any man. Waterproof wagon and horse-covers, tarpaulins sheets, coats and leggings of every description made to order on the premises. Special rates to Lumbermen. Send for catalogue and price list to



NATIONAL MANUFACTURING CO.,
202 Sparks Street, Ottawa

HART EMERY WHEEL COMPANY, Limited

HAMILTON,

CANADA.

GILBERT HART, Detroit, President. JAMES T. BARNARD, Hamilton, Secretary-Treasurer. SAMUEL BRIGGS, Hamilton, Superintendent.

MANUFACTURERS OF THE CELEBRATED

DETROIT

EMERY and CORUNDUM WHEELS

These Wheels are Wire Strengthened!

SPECIALLY ADAPTED FOR SAW GUMMING

Neither Animal nor Vegetable Glue or Gum being used in their composition, they are NOT LIABLE TO HEAT, and give out no Odors, while

They Surpass All Other Wheels for Free Cutting and Durability.

We refer to the following well known Saw Manufacturers for Opinions as to the Quality of our Wheels :

Messrs. SHURLY & DIETRICH, Galt; Messrs. R. H. SMITH & CO., St. Catharines; JAMES ROBERTSON, Esq., Montreal; Messrs. JAMES ROBERTSON & CO., Toronto. We also refer to WILLIAM HAMILTON, Esq., Peterborough, Manufacturer of the Covell Saw Sharpeners; and to Messrs. H. B. RATHBUN & SON, Deseronto, Lumber Merchants. 1y116

F. E. DIXON & CO.

MANUFACTURERS OF PURE BARK TANNED

LEATHER BELTING

First Prize, Provincial Exhibition .....Ottawa, 1875
First Prize, Provincial Exhibition.....Hamilton, 1876
First Prize, Provincial Exhibition.....London, 1877
First Prize, Industrial Exhibition .....Toronto, 1879
First Prize, Industrial Exhibition .....Toronto, 1880
International Medal, Centennial Ex.....Philadelphia, 1876

None genuine unless with a STAR on the head of rivets. Send for Price Lists and discounts.

6L17

81 Colborne Street, Toronto.

PORTABLE

Saw Mills, Grist Mills and Shingle Mills

DOUBLE EDGERS, LUMBER TRIMMERS.

THE MIXTER SAW GUMMER IS KING.

MORE GUMMERS and SWAGES sold the past year than ever before. The great and constantly increasing demand for the "MIXTER GUMMER" settles the question of its efficiency and superiority over **all other Gummers in Market.**

The following is a fair sample of the many flattering testimonials which are constantly pouring in upon us :—

WEST TROY, N. Y.

DEAR SIRS—Your Patent, Automatic, Self-Feeding Saw Gummer is a perfect success.
Yours, &c., E. MORS & CO., Lumber & Timber Dealers.

WATSON, EFFINGHAM CO., Illinois.

GENTS—I am using one of your Patent Automatic Self-Feeding Saw Gummers at each of my three mills, and I would not take one hundred dollars for it if I could not get another like it.
Yours truly, WM. ANDERSON.

CORINTH, Miss.

GENTLEMEN—The Patent Automatic Self-Feeding Saw Gummer we bought of you just fills the *bill exactly.* We gummed a sixty-inch saw with sixty teeth, cutting on an average of three-fourths inch deep to each tooth, with one cutter without sharpening it.
Respectfully yours, WHEELER & WILLIS.

THE CUTTER OR BURR referred to in the above, (¾ in.) cost **90 CENTS**, it takes one-half minute to each tooth, and the saw is gummed without removing it from the mandrel. ☞ALL SAWY ERS know this is a great advantage, besides a saving in time.

We challenge **ANY** saw tool manufacturer in the United States to produce such an array of unsolicited testimonials as we have received for our GUMMER AND SWAGE.

Of course we have not room here for an extended list.

Our goods are now so well established throughout the country, that information can be easily obtained as to their practical working from any of the **Several Thousand** Sawyers who have them in use.

In short the MIXTER GUMMER is pronounced by *all* to be the "**BOSS GUMMER.**"

Send for circular and price list with cash discounts.

EWAN CHAIN for Sawdust Carriers, Live Rolls, &c. SAWS and Saw Furnishings.

L15

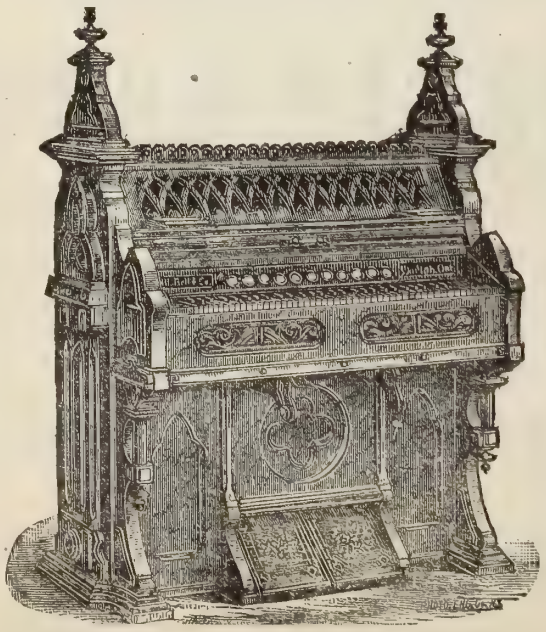
Waterous Engine Works Co., Brantford, Canada

The Crowning Triumph of the Bell Organ

The Bell Organs have just received the HIGHEST AWARD and SPECIAL PRIZE (Gold Medal) at the International Exhibition, Sydney, Australia, this year for their Organs over all the English and American makers. This, along with the unlimited awards, prove that

THE BELL ORGANS LEAD THE WORLD.

WE RECEIVED
Medal and Diploma ....Provincial Exhibition, 1871
Medal and Diploma .....Centennial Exhibition, 1876
International Medal and Diploma, Sydney, Australia, 1877



WE RECEIVED
Only Medal for Parlor Organ, Provincial Exhibition, 1878
Only Medal for Parlor Organ, Industrial Exhibition, 1879
And Gold Medal.....at Sydney, Australia, 1880

The Bell Organ Manufactory is the Largest and Oldest in the British Empire, and the fact that we have sold nearly 15,000 proves that they are the best in the market. We GUARANTEE ALL OUR ORGANS for five years. Correspondence invited. Illustrated Catalogue mailed free.

W. BELL & CO.

41 to 47 East Market Suqare, GUELPH, Ont.

L17

Penetanguishene Foundry

AND

MACHINE SHOP

CRAIG & CAMERON, Proprietors.

The undersigned beg to announce to the public that they are prepared to make all kinds of **Mill and Steamboat Brass and Iron Castings.**

All kinds of PLOW CASTINGS kept on hand. Plow Points and Landsides a specialty.

We have first-class machinery and are prepared to do all kinds of TURNING or PLANING on short notice.

We hope by strict attention to business and moderate charges, to merit a share of the public patronage.

☞All work guaranteed.

G. A. CRAIG.
C. CAMERON.

1yL17

SALE BY TENDER

OF EXTENSIVE STEAM

Saw-Milling Property

AT

Parry Harbour, Georgian Bay, and Valuable Timber Limits in the Parry Sound District.

The SAW-MILL is complete in its appointment, and has a cutting capacity of 90,000 to 100,000 feet per day of twelve hours.

The LIMITS cover an area of 229 square miles in the Townships of Monteith, Humphrey, Christie, Ferguson, Hagerman, McKellar, Spence, and Shawanaga, besides the purchased rights to cut the timber from numerous lots in the same Townships, and contain a large quantity of standing pine.

The whole establishment is in complete condition and active operation, and is excellently situated for the manufacture, sale and shipment of timber.

Tenders for the whole property, including plant, will be received until the 20th August next, addressed to the General Manager, Ontario Bank, Toronto, by whom terms of payment and any further information will be furnished on application. No tender will be accepted unless satisfactory to the vendors. 4L17

KERR BROS.

PRACTICAL

Founders, Machinists,

And Millwrights.

Manufacturers of Marine and Horizontal and Portable

Engines, Boilers

Grain Elevators & Steam Hoists,

Saw and Flour Mill Machinery.

With Latest Improvements A SPECIALTY.

The ABEL EDWARDS CENTENNIAL TURBINE WATER WHEEL.

RODEBAUGH'S SAW FRAME, MILL DOGS and SAW GUIDES.

WATER WORKS, THE LATEST AND MOST IMPROVED, MADE TO ORDER.

LIGHT and HEAVY BRASS and IRON CASTINGS.

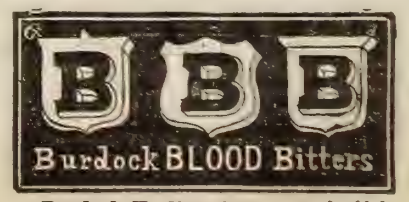
☞Plans and Specifications on application.☜

The Walkerville Foundry

AND

MACHINE WORKS.

Walkerville, Ont., June 1881. 12L16



Burdock Healing Ointment should be used in connection with Burdock Blood Bitters for curing Ulcers, Abscesses, Fevers, Sores, &c. Price 25 cents p.r box. T. MILBURN & CO.,
SOLE AGENTS, TORONTO.

IRWIN & BOYD

Commission Lumber Dealers,

FORWARDERS,

Shipping and General Agents

PORT HOPE.

We have added to our plant all the latest improved machinery for Electro and Stereotyping, and the manufacture of Printers Furniture, facilities for executing work which no other establishment in the Dominion possesses, and not excelled by any on the continent. A large assortment of various cuts constantly on hand.

FLEMING & SON,
26 Colborne St., Toronto.

L14

SUN CLOCK

IF YOU WANT A GOOD RELIABLE

WATCH

At a REASONABLE PRICE, call at

DAVIS BROS.

130 Young Street, Toronto.

N.B.—Repairing Promply Attended to.

M. Covel's Latest Improved Automatic Saw Sharpener!

Is the Most Perfect Machine that has ever been Introduced into Mills for that purpose.

CIRCULAR SAW STEAM FEED!

I would also call special attention to my

Heavy Circular Saw Mills

and for STEAM MILLS, would recommend the Steam Feed, having put in several which are giving the best of satisfaction, as will be seen by the following testimonials:—

GRAVENHURST, August 20th, 1880.

WM. HAMILTON, ESQ., Peterborough.

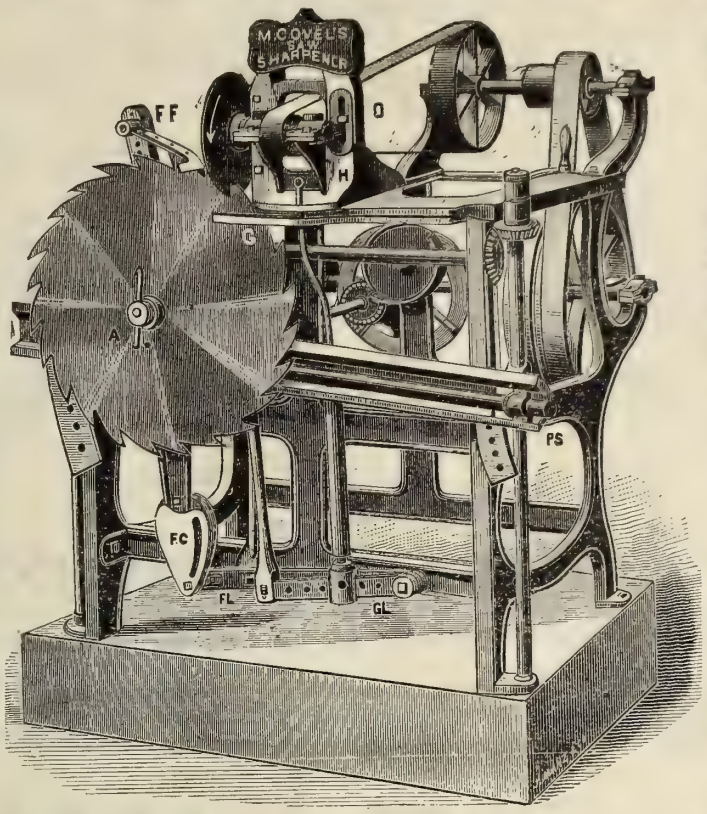
DEAR SIR—I have used your Steam Feed for near four months, and it has given me perfect satisfaction in every way; it is admitted by every person who has seen it work to be the best feed ever invented. Since I put it into my mill, I have not lost ten minutes time fixing anything belonging to it. I can cut 18 boards 13 ft. long in one minute. It can do much smoother and better work than the pinion feed. It is easily governed and reverses the carriages instantly. I am thoroughly satisfied with it and can recommend it to any person who has a Circular Saw Mill for cutting long or short logs. I consider I have cut more lumber than will pay for the Steam Feed since I got it than I would have cut had I not put it in.

Yours respectfully,
WILLIAM TAIT,
Lumberman, Gravenhurst.

TORONTO, August 11th, 1880.

WM. HAMILTON, Peterborough, Ont.

DEAR SIR—The Steam Feed you put in is working splendidly. Yours, &c.,
THOMPSON, SMITH & SON.

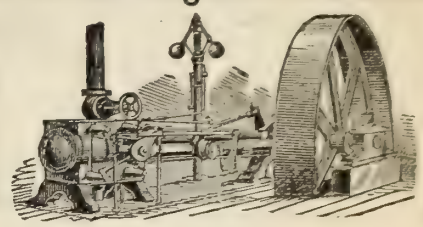


MILL MACHINERY!

I am also manufacturing Saw Mill Machinery, for all sizes of Gang or Circular Mills, Span or Double Circulars for Slabbing Small Logs. My Patent Jack Chain for drawing logs into Saw Mills, acknowledged by all to be the Cheapest and best ever got up; also, my Patent Lumber Markers, different sizes of Edgers, Gang Lath Mills, Trimmers, Power Gummers, and all Machinery used in a first class Gang or Circular Saw Mill; also, small Hand Gummers for use in the woods, for Cross-cut Saws. Rotary Pumps of different sizes, for Fire Protection in Mills, &c.

Horizontal Engines and Boilers

CORLISS ENGINES



Where economy of fuel is the great consideration, along with uniformity of speed, such as is required in Grist and Flouring Mills, Woollen and Cotton Factories, or large Factories of any kind, I supply the Corliss Engine. I feel justified in saying that our Style, Workmanship and Finish on this Engine will be no discredit to its renown, and certainly is not equalled in this country for economy of fuel. I have them working at 2½ pounds of coal per horse-power per hour. L10

WILLIAM HAMILTON - - PETERBOROUGH, ONT.

LUMBERMEN'S STATIONERY.

We will supply anything in the line of BLANKS or STATIONERY for Lumber Shanties and Offices at City prices.

All Printing done in the Highest Style of the Art, and at Lowest Living Prices.

Book-Binding of every Description got up in a very Neat and Superior manner.

Account Books Ruled and Bound to any desired Pattern.

For Schedule of Prices address, describing the kind and quality of work desired,

TOKER & CO.,

"THE CANADA LUMBERMAN,"

PETERBOROUGH, ONTARIO.

JAMES ROBERTSON & CO.

TORONTO, ONTARIO,

MANUFACTURERS OF EVERY VARIETY OF

Circular, Mill and Gang Saws

INSERTED TOOTH SAWS

A SPECIALTY.

Emerson Pattern and Lumberman's Clipper.

SAWS REPAIRED.

EVERY SAW WARRANTED.

SEND FOR PRICES. 6L13

EMERY WHEELS FOR SAW GUMMING!

Solid Emery Wheels are now almost in universal use for the purpose of gulletting and gumming saws. Statistics show from 25,000 to 30,000 saw-mills in the United States. Many of these run only a single saw each. A one-saw mill would use one or two wheels a year, costing $3 to $4 each, and when such small mills order single Emery Wheels from the factory, the express charges often equal the cost of the wheel. There was a time when the quality of Emery Wheels was so uncertain, and the demand so fickle, that storekeepers could not afford to carry them in stock. Now, however, Saw Gumming Wheels have become as staple an article as Files, and every dealer in saws, Hardware and Mill Supplies can afford to carry a few dozen standard sizes in stock. Large dealers order stocks of $500 to $750 worth at a time. Saw Gumming Wheels are used with the edge (or face) square, round, or beveled. Probably seven-eighths of all in use are beveled.

The principal sizes are:

8x1/4, 8x5/32, 8x1/2 } 3/4 in. hole. 10x1/4, 10x5/32, 10x1/2, 10x5/8 } 3/4 in. hole. 12x1/4, 12x5/32, 12x1/2, 12x5/8, 12x3/4, 12x1/8 } Holes, 3/4, 7/8 and 1 inch.

Probably more wheels 12x1/8, 12x1/2 and 12x1/4 are used than all the other sizes together. Saw Gumming Wheels are used, however, of all sizes up to 24x1 1/2. The most frequent complaint is that Emery Wheels harden the saw so that a file won't touch it. The answer is that you don't want a file to touch it. An expert workman will shape and sharpen the teeth with an Emery Wheel, leaving the teeth *case hardened*, in which condition the saw will cut about 33 1/3 per cent. more lumber than a soft saw will. Those who want to use the file, however, have only to touch the saw *lightly* a second time (after going all over it once), and this second touch will cut through the case-hardened scale.

A QUESTION OF QUALITY.

Thirteen years of experience as makers of, dealers in, and actual users of Emery Wheels, have led us to a decided opinion as to what quality is the best. We prefer for almost every use an "Extra Soft" wheel like the "Pocono." We believe that money lost through the rapid wear of the wheel is more than made up by the money saved on wages. As we cannot get every one to adopt our views, we make several qualities, so as to meet their views. We say to those who think they can only be satisfied with some other make of wheels (not Tanite), that we can furnish qualities *to match* any and every other make. If you have got used to some special quality of wheel, let us know what it is, and we can send you *a Tanite Wheel of similar quality*. Our *regular* classification of Saw Gumming Wheels is as follows:

CLASS 2. MEDIUM—HARD.—This Wheel is THE STANDARD Saw Gumming Wheel all over the world. Probably seven-eighths of all the Saw Gumming Wheels used are "Class 2." It cuts fast and keeps its shape well. Some think it too hard, some too soft. We prefer the "Pocono."

CLASS 3. MEDIUM—SOFT.—The same as to coarseness and fineness as "Class 2," but a *softer*, and therefor freer cutting wheel.

CLASS "POCONO." EXTRA SOFT.—This Wheel we prefer to all others. It is both *finer* in grain and softer than either of the above. As a Saw Gumming Wheel, Class "Pocono" is specially suited to those practical and experienced Sawyers who know how to grind with a light touch, and who want a free cutting wheel that will not create much heat.

Illustrated Circulars and Catalogue, showing Cuts of Saw Gumming Machines, and Shapes, Sizes and Prices of Wheels, sent free on application.

L13

The Tanite Co. Stroudsburg, Monroe Co. Pennsylvania

CANADIAN TRADE SPECIALLY SOLICITED.

THE CANADA LUMBERMAN

AND MILLERS' MANUFACTURERS' AND MINERS GAZETTE.

PUBLISHED SEMI-MONTHLY.

The only Newspaper devoted to the Lumber and Timber Industries published in Canada.

SUBSCRIPTION $2.00 PER ANNUM.

VOL. 1. PETERBOROUGH, ONT., JULY 15, 1881. NO. 18.

THERE is now brought into the city of New Orleans annually about 15,000,000 feet of timber, which is sawed into lumber by mills in the city, and there is received besides about 60,000,000 feet of lumber, 6,000,000 shingles, 40,000,000 cords of wood and 25,000,000 staves, a large portion of which is exported to foreign ports, and there seems to be no good reason why the wood trade of New Orleans should not be largely increased. Louisiana abounds in magnificient virgin forests with ample water facilities for transporting it to market. While its total area is 26,105,600 acres, but 3,700,000 acres are under cultivation, and 5,821,000 acres consist of prairie and sea marsh lands leaving 17,584,600 of almost untouched forest lands, abounding in red, white and black oak, hickory, ash, beech, dogwood, cypress, cottonwood, elm, pine, etc., etc. Evidently New Orleans is destined to become an important lumber centre.

THE *Northwestern Lumberman* of the 25th ult., says: There are now coming to this city (Chicago) about 60,000 cubic feet of walnut logs belonging to Ontario parties, and destined for the European market. The owners have had a force of men securing them, principally in Missouri. There will be three cargoes, and they will be forwarded from here to Quebec, thence to European ports. The chances for eastern buyers to obtain walnut in western Missouri are growing smaller every day. Manufacturers in that section have come to understand that the great stretch of country west of them will be calling for furniture continuously, and they have decided that it is better to manufacture it there than to ship the walnut east and in turn ship the furniture back. Of late a great many factories have been built in that state, and they make a lively effort to secure the walnut that grows in the surrounding country. At present they are paying from $40 to $50, log run.

THE business of 1881 thus far, presents to the mind of the observer two important features. The first is the fact that trade this season has practically escaped its usual attack of weakness. As a rule holders and sellers have been compelled to submit to a decline on the opening of navigation, and even to witness a regular break up in prices, but this year, except in Chicago, there has been no period of weakness, and even then it amounted to comparitively nothing Then, in the second place, it will have been observed that throughout the season it has been difficult to fill orders, and at no time during 1881 has there been lumber enough in the hands of dealers to meet the demands made upon them promptly. Broken assortments have been the rule, which is the best proof that instead of stocks accumulating they have moved off as rapidly as they were ready for consumption. So long as this state of affairs continue there need be no apprehension of any general decline.

SAW GUMMING.

There are several contrivances for the troublesome but necessary job of gumming saws. Files, burr gummers, punches, and grindstones have in turn been used, but nothing has proved itself so rapid and efficient as the Emery or Corundum Wheel. To perfect their operation, inventors have not been slow to place before lumbermen, machines to run these saw gumming emery wheels. Mr. W. Hamilton, Peterborough, is now supplying a machine for this purpose, and judging from the demand he has for them, the Covell Saw Sharpener must be a very efficient tool. Our readers will notice from our advertising columns that the celebrated Hart Emery Wheel, well known to American lumbermen as the "Detroit Wheel," is now being made in Canada. The manufacturers, whose headquarters are in Hamilton, claim to have given special attention to the wants of sawyers, and as a result are offering a Corundum or Emery Wheel thoroughly adapted in every respect to the work of saw gumming and saw sharpening. The prominent and well known firms to whom they refer, indicate that their efforts to produce a good article have been successful, and that they are well-deserving of a share of the trade. We understand that a guarantee of absolute efficiency accompanies each wheel.

THE STREAMS BILL.

We clip the following letter from the Toronto *Globe* of the 6th of July:—

SIR,—In both your own and the columns of your leading contemporary on the other side, there have been recently many letters and articles on the disallowed Streams Bill, No. 102.

As I am here on the spot in the district which would be, perhaps, most affected by the Bill becoming law, I think I am justified in writing a few lines thereon. I will avoid alluding to the partisan arguments which have been advanced on either side, so that my remarks may be as short as possible.

The Bill as a Bill is not to be admired, seeing that privileges and rights conferred on anyone thereby are granted only for and terminated by the spring, summer, and autumn freshets. Therefore, after any freshet is over these persons with their dams, piers, aprons, etc., would have to clear out or be treated as trespassers.

If the Ontario Legislature cannot procure to be drawn a simple Bill to carry the meaning they intend nearer than this, the sooner some member moves the Minister of Education into the Speaker's chair the better.

But joking apart the Bill is all right, excepting that it is all wrong, that is, the principle is right but the details are enormities.

It is just that streams should be considered highways, and that means should be provided to make them efficient, but it is wrong to place the power to govern, alter, and superintend in the hands of each and any private individual who desires their use.

By this Bill anyone who wishes to take a log or boat or raft—the latter definition might be satisfied by two sticks and a sheep hurdle—down any stream, may construct "aprons, dams, slides, gate locks, booms, and any other work therein or thereon necessary to facilitate the floating and transmitting of such logs, &c., &c.," and they have also the right to use all means usual amongst lumbermen, the damage being only restricted when it can be shown to be necessary to facilitate the passage of logs, rafts, crafts, etc. In the name of common sense is not this legislation gone mad? Any one who wishes to float sticks or walnut shells (timber and craft) down any stream, or when a stream is created during the freshets, may build dams and aprons or use any other diabolic means usual to lumbermen to facilitate the transit, and if they drown out 2,000,000 acres no one is entitled to claim a cent for damages. A single dam might drown out miles of country, and destroy on it the timber the property of the Crown; the destroyer falls back for protection on this Bill, which has for its object the public interest. If honest, the Ontario Legislature ought to be thankful that their production has been consigned to the limbo of the waste paper basket.

The fact yet remains,

1. That all permanent streams should be available as public highways for floatage of timber, *id est*, sawlogs, square timber, booms; ties, telegraph poles, and all like matters.

2. That any improvements or works constructed by any private owner should be available at fair tolls for public benefit.

But any damage caused by alterations should be made recoverable from the State, and in assessing damages the property must be considered as a whole, and in agricultural lands the raising of the water table—that is, the level at which the water stands beneath the soil—must be considered.

Lastly, the regulation of tolls should rather be left to arbitration than to the decision of the Licutenant-Governor in Council.

I have no more to say on this, I trust, moribund Bill, with the exception that I am surprised that the gentleman to whom the inhabitants of this district confided their interests at the last election should have permitted such a measure to pass the House without protest.

I am, Sir, your obedient servant,

E. G. MUNTTZ.

ALPORT, Muskoka, July 4, 1881.

THE MOST MISERABLE MAN IN THE WORLD is the dyspeptic, and dyspepsia is one of the most troublesome difficulties to remove, but BURDOCK BLOOD BITTERS always conquer it. It stimulates the secretions, regulates the bowels, acts upon the Liver, aids digestion, and tones up the entire system. Trial bottles 10 cents, large bottles $1.00.

THE TIMBER OF BRITISH COLUMBIA.

That section of British Columbia west of the Cascades and including Vancouver and Queen Charlotte Islands is, according to Professor Macoun, covered with, probably, one of the finest forests in the world. Chief amongst the trees is the Douglas fir *(Abies Douglasii)*, which is the chief forest tree, and which is used throughout the country for building purposes, and for export in the form of deals and spars.

White cedar *(Thuja gigantea)* is another giant, and in the Valley of the Fraser and up the coast attains to an immense size. The Indians use this wood altogether in the construction of their houses, and in building those large canoes which are the wonder of the eastern people.

The other trees are a species of yew, another of alder, two species of fir *(Abies Menziesii* and *grandis)*; two species of pine *(Pinus contorta* and *monticola)*; two species of maple *(Acer macrophyllum* and *circinatum)*; hemlock spruce *(Abies Mertensiana)* is a common tree on the mainland; while a species of oak *(Quercus Gayrrana)* is abundant on the island, but has not been detected on the continent. An evergreen tree *(Arbutus Menziesii)* is quite common along the coast of the island, and, both summer and winter, its foliage contrasts finely with that of the sombrehued Douglas fir.

In the second, or arid distrct, ai pine *(Pinus pondcrosa)* takes the place of the Douglas fir on the coast, and is a very valuable tree, growing to a large size, with clean trunk, and resembling the red pine of Ontario very much. The tops of the lower mountains and the sides of the higher ones support a heavy growth of Douglas fir, but it is far from being the beautiful tree of the coast.

The timber of the third region is not so good, and consists principally of poplar and black pine *(Pinus contorta)*, with occasional groves of Douglas fir on the higher hills. Black and white spruce, with a little balsam fir, make up the remainder.

The island of Vancouver is about 300 miles in length, with an average breadth of about 60, and probably contains 20,000 square miles. The soil is good, but the surface is so much broken by rock that it is altogether impossible to tell the amount of good arable land on the island. There is no doubt the day will come when Vancouver will support a large population—partly agricultural, and partly engaged in mining, lumbering, and fishing.

Burrard Inlet is situated on the Gulf of Georgia, a few miles from New Westminster. It is nine miles long—deep and safe. It is the port from which the lumber trade is chiefly carried on. It is very easy of access to vessels of any size or class, and convenient depth of water for anchorage may be found in almost every part of it.

McLAREN vs. CALDWELL.

JUDGMENT BY THE COURT OF APPEAL—THE DECISION OF V. C. PROUDFOOT OVER-RULED.

C. J. SPRAGGE delivered judgment in this case on Friday in the following terms :—

The plaintiff describes himself in his bill as a lumber merchant, lumber dealer, saw miller, and lumberman, and states that the defendant carries on the same branches of business. The bill enumerates some twelve parcels of land, of which it is stated that the plaintiff is the owner, and it states also that he is owner of large tracts of timber. The bill goes on to allege that the streams flowing through these parcels of land were not navigable streams, "nor floatable for logs and timber" while in the Crown, nor until after the improvements set forth in the bill were made on the said streams by the plaintiff, and that in their natural and unimproved state they would not, even during freshets, permit of saw logs or timber being floated down the same, but were useless for the purpose, and in the 10th paragraph there states his rights :—"The plaintiff is entitled, both as riparian proprietor and owner, in fee simple, of the bed of the said streams where they pass and flow through the said lots, respectivcly, to the absolute, exclusive, and uninterrupted uses of the said streams for all purposes not provided by law, and amongst other purposes to the absolute and exclusive right to the user of the same for the purpose of floating or driving saw logs and timber down the same." He then goes on to say that in various parts of the said streams, which run and flow through lands therein described, the plaintiff and those through whom he claims have expended a large amount of money in making certain specific and very valuable improvements, which he sets out in a number of the following paragraphs of the bill.

The complaint is in substance, that the defendants having got out several thousand saw logs, threaten, and intend to avail themselves of the improvements set out in the bill, and that in floating and running the timber and logs down the stream they are interfering with and obstructing the plaintiff in running and floating down his lumber and saw logs, and he takes this ground, that the defendants in so doing are wrongfully and forcibly, and without right, or colour of right, making use of the improvements made by the plaintiff, and those under whom he claims, and of which plamtiff is entitled to the exclusive and uninterrupted user.

Evidence was given at great length before V. C. Proudfoot. That learned judge considered that he ought to follow the case of Boale v. Dickson, and that he understood that case to determine that if any improvements are necessary to render the streams floatable, the statute does not apply; that it does not alter the character of the private streams, and that the owner of the land over which the stream flows has the right to prevent intrusion upon it. Upon the evidence he came to the conclusion that without the artificial means of which evidence was given neither of the streams upon which improvements had been made by the plaintiff could be considered floatable, even in freshets or high water.

That was the issue upon which the evidence in the cause was given, and that the proper issue of the construction placed upon the statute in Boale v. Dickson was the proper construction.

Upon the appeal to this court it is contended that the construction placed upon the statute in Boale v. Dickson was not correct. It becomes our duty, therefore, to consider and determine that question.

It is obvious from a perusal of the Acts (which are considered in c. 48 of the C.S.U.C.) that it was the policy of the Legislature to encourage the lumber trade of the province; and to preserve the fish in the streams. The Act of 1828-9, Geo. IV., c. 24, recites: "*Whereas*, it is expedient and found necessary to afford facility to the inhabitants of this province engaged in the lumber trade in carrying their rafts to market, as well as for the ascent of fish in various streams now obstructed by mill dams." Then follow two sub-sections, which are embodied in section 3 of the Consolidated Act.

The same policy is evidenced by 12 Vic., c. 87, the first section of which supplies what may be taken to have been an omission of the Act of 1828, viz., that aprons or slides to mill-dams should be so constructed as to afford sufficient depth of water for the passage of saw logs, lumber and timber—a provision embodied in sec. 4 of the Consolidated Act.

Then in sec. 5 of the same Act we find enacted what is embodied in secs. 15 and 16 of the Consolidated Act. The first clause of sec. 5 is in the same terms as sec. 15, beginning thus :—"And be it enacted that it shall be lawful for all persons to float saw logs" (and so to the end of sec. 15) "and other timber rafts and craft down all streams in Upper Canada during the spring, summer, and autumn freshets; and no person shall, by felling trees or placing any other obstruction in or across any such stream, prevent the passage thereof."

In Boale v. Dickson this opinion is expressed, "that the right so given extends only to such streams as in their natural state will, without improvements, during freshets permit saw logs, timber, etc., to be floated down them, to streams of a different class to those mentioned in the third section "Down which lumber is usually brought."

No such qualification of the right given by section 15 is to be found in the Act nor in any other previous Acts thereby consolidated. There is nothing in the context of any of these Acts showing or tending to show that such qualification was intended; and we know from what we find in the evidence taken in this cause, that confining the right given by section 15 to such streams as are described in the passage I have quoted from Boale v. Dickson would go far to defeat the avowed policy of the Legislature. Evidence was offered that in some of the streams in the province, at the date of passing of these Acts, saw logs, timbers, &c., could be floated down in their natural state without improvements, even during freshets. The evidence was stopped by the learned Vice-Chancellor upon the objection of the plaintiff's counsel after some evidence in that direction had been given. But from the evidence that was given in the cause it is apparent that if section 15 is to be read with the qualification given to it by Boale v. Dickson, a very large number of the streams in the province would be excluded from its operation.

I agree with what is said in Boale v. Dickson "that assuming the plaintiffs to be the owners of the bed of the river, and considering this Act to be a diminution of private rights, no greater right can arise to the defendant under it than a right to float timber, &c., down during freshets; it confers no right to in any way either improve or deepen the natural channel." I do not understand by this that a person to whom such right to float timber down is given, &c., may not remove fallen timber and such like obstacles to navigation as are referred to in Crell v. The G. T. R. Co. But taking what is said in the passage I have just quoted from Boale v. Dickson to be correct, it may well be conceded without affecting the constitution of the Act. It may be thought that the Legislature had over much regard for the interests of the lumbermen, and too little regard for the interests of riparian proprietors. Our province is to construe the Act and not to fail to give due effect to it under an idea that its provisions press over hardly upon one class of persons for the benefit of another class.

I do not feel pressed by the consideration that no right is conferred upon lumberers "to alter improve, or deepen the natural channel." It does not prove that it was not intended to confer upon them the privilege of availing themselves, in the floating of their logs and lumber, of improvements found by them to have been already made in the natural channels of the streams.

The statute makes no provision for compensation to those at whose expense improvements have been made. We may conceive that it would have been more just that provision should have been made for compensation. The Legislature, however, may have felt difficulty in the way of adjusting a scale of compensation, or may possibly have taken some view as this :—The different lumbermen make improvements on their respective properties, each for his own sake. By giving to all a common right over the property of all, we may make an approximation of doing justice to all. Some may be gainers by doing this more than others; but it is the only way of accomplishing that which is, with us, a paramount object, the fostering of the lumber trade. That this was a paramount object is evidenced by the recitals to the earlier Acts that I have quoted.

Apart from all these considerations, we have the plain unequivocal language of the Act. To adopt the construction put upon it in Boale v. Dickson, we must read "all streams" as meaning "some streams" and we look in vain in the Act for any class of streams defined as they are defined in Boale v. Dickson. If what is supposed in that case to have been included had been really intended, section 15 should have run thus, "All persons may float saw logs and other timber during the spring, summer, and autumn freshets, down," not all streams—"but such streams as in their natural state will without improvements permit saw logs, timber, &c, to be floated down them." It is too much to say that such an alteration of the Act is not construction, but legislation?

Reference is made in B. & D. "to streams of a different class to those mentioned in the third section," "down which lumber is usually brought." The streams mentioned in the third section are those down which lumber is usually brought, and on which a mill dam may be legally erected. That cannot be a stream down which in its natural state, without improvements, timber, lumber, etc., could be floated, because on such a stream a mill dam could not be legally erected. The words "all streams" could not be applied only to that class of streams. There is another class denominated "small streams," which certainly did not form the class, though they might be comprehended in the class to which the words "all streams" applied.

I am unable to concur in the construction put upon sec. 15 of the Act in Boale v. Dickson. There being no context, nor indeed anything whatever in any of these Acts on this subject, to control the ordinary grammatical meaning of the words used, we must read them in their ordinary grammatical sense; and should, therefore, construe sec. 15 as giving the privilege to all persons to float saw-logs and other timber down all streams in U. C. during the spring, summer, and autumn freshets.

It follows that, in my judgment, the issue tried before the learned Vice-Chancellor was not an issue that arises under the statute; but that the defendants had to have the right conferred upon them by sec. 15 of the Act, to float, during the freshets named in that section, their timber, rafts, and crafts down the streams down which they were causing them to be floated when their rights were called in question by the plaintiff's bill.

We, of course, do not question the propriety of the course taken by the learned Vice-Chancellor in accepting the interpretation put upon the Act in Boale v. Dickson. But being unable, after a careful consideration of the various Acts passed upon this subject, to concur in that interpretation my conclusion is that the plaintiff's bill must be dismissed.

For reasons which the Chief Justice gave at length, each party is left to pay their own costs.

DIFFERENCE OF OPINION.

In the foregoing decision delivered by the Chief Justice of Appeal, Patterson, J., and Morrison, J., concurred, but Burton, J., held different views. We publish his judgment below.

CHIEF JUSTICE BURTON'S OPINION.

In this case I have the misfortune to differ with my learned brothers, and if this had been a court of last resort, whilst not concurring, I should not have thought it proper to express my dissent, but under the circumstances I think it is but fair to the litigants and respectful to my collegues briefly to express the grounds on which I feel compelled to come to a different conclusion. The expiration of the general common law principles applicable to inland waters would seem to be well stated in the case of Waldsworth v. Small (2 Fairfield, 280), and to be consistent with the doctrine in the tract *de jure maris* sometimes, but it is said erroneously, attributed it to Lord Hall, viz. that those streams which are sufficiently large to bear boats or barges, or to be of public use in the transportation of property, are highways by water, over which the public have a common right, and the private property of the owner of the soil is to be improved in subserviency to the enjoyment of this public right; whilst, on the contrary, such little streams are not as floatable, that is, cannot in their natural state be used for the carriage of boats, rafts, or other property, are wholly and absolutely private, not subject to the servitude of the public interest, nor to be regarded as public highways by water, because they are not susceptible of use as a common passage for the public. Numerous decisions are to be found at a very early date in the United States to the effect that although the adaptation of the stream to such public use may not be continuous at all seasons, yet the public right attaches and may be exercised whenever opportunities occur. In the case of Thunder Bay River Company v. Speedily, 31 Mich., 343. Mr. Justice Cooley thus refers to the subject :—"Nor is it essential to the easement that the capacity of the stream in its natural state and its ordinary volume of water should be continuous, or, in other words, that its ordinary state at all seasons of the year should be such as to make it navigable. If it is ordinarily subject to periodical fluctuations in the volume and height of its water attributable to natural causes, and recurring as regularly as the seasons, and if its periods of high water and navigable capacity ordinarily continue a sufficient length of time to make it useful as a highway, it is a subject to the public easement—referring to Morgan v. King, 35 N.Y., 459, 18 Barbour 284, and 30 Barbour 9."

It would seem that this very reasonable view of the common law doctrine in reference to these streams had at a very early day been recognised by our own Legislature.

Thus we find in the first act passed in Upper Canada in reference to mill-dams, 9th Geo. IV., c. 4, that it was passed in the interest of persons engaged in the lumber trade, to afford facilities for the conveyance of their rafts and lumber to market, and that the owners of mill-dams, erected on the proprietor's own lands, across any stream down which lumber was usually brought, were compelled to make provision for its passage by the construction of sufficient aprons, and in several other Acts before we come to the 12th Vic. provision is made for floating down square timber and other manufactured lumber prepared for market.

The latter Act, though passed also evidently in the interests of lumbermen, made provision also for the protection of the mill owner so long as he complied with the conditions prescribed, otherwise the lumberman was at liberty to abate the dam as a nuisance if it interfered with his use of the stream.

In the same Act, however, we find the Legislature using language not only confirmatory of the view that the public had the right to use such streams as I have referred to, but declaring that all persons may during the spring, summer, and autumn freshets float sawlogs and other lumber, rafts, &c., down all streams, a provision which in my opinion was intended to be simply declaratory of the Common Law right of everyone to use every stream that was capable, in its natural state, and its ordinary volumes, of transporting in a condition fit for market the products of the forests or other propeprety, with an express statutory declaration superadded that it was not essential to the public easement that the capacity of the streams as those defined should be continuous, but that it should be exerciseable even though it could only be so exercised in times of freshet.

This was then the state of the law in several of the neighbouring States where lumbering operations were carried on to a very large extent, but it was not the universal rule there, the courts in some places holding that a stream which is not capable of being used at any time for the passage of boats or the floating of rafts and logs, except when swelled by rains or the melting of snow, is not in any legal sense a navigable stream, but is private property and not subject to the servitude of the public easement.

And this being the state of the authorities, it is not unreasonable to assume that a Legislature dealing with a similar state of things intended to place the question beyond dispute, and to declare that even though the stream

was not navigable at other times, if it became so in times of freshet the public right to pass at these times should be recognized.

If that is not the proper view to take of the enactment, but it was intended to declare these streams to be public highways, as my learned brother appeared to think, it would, I apprehend, follow that wherever the natural obstructions were removed by the owner of the soil so as to make those portions of the stream not previously navigable passable for boats or timber, the owner of the soil would not be in a position to exclude the public from the use or enjoyment of the stream so improved. The illustration given by my brother Patterson, of a portion of a concession line which is declared by law to be a common and public highway being impassable by reason of some physical obstruction, would then be applicable. It is because I am unable to find in any of these statutes language declaring these streams to be of that character that I am unable to concur in the conclusion of the other members of the court. I quite agree with them in their view of the doctrine laid down in Boale v. Dickson. I think there is nothing to warrant the qualified construction placed upon s. 15 of 12 Vic., c. 87, by the learned judge who delivered the judgment in that case, but I am unable to bring myself to the conclusion that the mere permission or the recognition of the right to float all stream during freshets make the entire stream *publici juris*, although in point of fact many portions of it may be quite impassable, even in times of freshet, for the smallest description of timber or other articles of merchandise. The language of a statute which would by a particular construction have the effect of interfering with the enjoyment of private property, or give the right to others to pass over it without compensation, ought to be very plain to induce a court to place upon it such an interpretation. I have pointed out what I conceive to be its proper meaning and intention, and full effect is given to the words by adopting that construction. If that be the correct interpretation, then I apprehend it will be still necessary to ascertain whether at the particular point where the stream passes through the plaintiff's land it was floatable when in a state of nature during freshets. If not, then in my view it is not floatable within the meaning of the authorities, but is wholly and absolutely private property. To illustrate my meaning as to what I conceive would be the effect of the statute if the judgment of my colleagues be correct, let us image a stretch of many miles above the place in question not only floatable, but navigable for larger vessels. A space than intervenes for say half a mile neither navigable nor floatable at any period of the year, followed by long stretch of navigable water to the mouth of the stream.

It is not necessary to the navigability of the stream that it should be navigable for its entire length. The public may use such parts of it as are navigable.

If, then, this intervening space had passed from the Crown into the hands of a private proprietor, and he has at his own charges made what was previous to the improvement his own in point of property, and non-navigable and non-floatable, to be passable for large vessels either by the deeping of the channel or the making of locks, can it be possible that under language similar to what is to be found in this statute the owners of steamboats and other large vessels could pass over such property of right; in other words, that a property which admittedly while it remained unimproved was strictly private property, unaffected by any public right whatever, lost that character and become *publici juris*, although made navigable entirely at his own and not at the public expense, because in an Act of Parliament it is declared that all persons may during the spring, summer and autumn freshets float saw logs, etc. down all streams. I venture, with considerable diffidence and doubt in the correctness of my own opinion, in consequence of the different view taken by learned brothers, to think that such a result could never have been contemplated by the Legislature. Yet such must be the result in the case suggested if the proper construction of the Act gives the defendant the power to float timber over these improvements of plaintiff as of right.

I repeat, then, that in my view of the statute it was intended to confer no new right, but to remove all doubts as to the right of lumbermen to use a stream passing through private lands, even though not at ordinary times, if it could be made useful at a time of freshet. If that be the proper construction of the section, then it would be necessary to examine the evidence for the purpose of ascertaining whether at the particular points where the stream passes through the plaintiff's land it was a floatable stream before the improvements, but as the other members of the court take a different view of the statute, it becomes unnecessary for me to do so. Upon the other appeal from the judgment of V. C. Ferguson it becomes unnecessary to offer any opinion, except with a view to the costs. I may say, therefore, that to my mind the 27th section of the Appeal Act can have no application to a case of this kind—there can be no execution of a decree necessary or possible in a case where the decree is, if I may use the term, executed as soon as made. There was nothing to be done under it, and nothing further would require to be done unless it were disobeyed, in which case I apprehend that without the formal issue of a writ of injunction the parties to the suit could be proceeded against for contempt.

I think, therefore, that the appeal should be dismissed with costs.

In the main appeal I am pleased to find that the other members of the court have seen their way to the allowance of the appeal, as a contrary conclusion could not have been otherwise than disastrous to one of the most important industries of the Dominion; the result is that the public become entitled to use the plaintiff's improvements without compensation, which was most properly secured to him under the Act which has recently been disallowed.

MISCELLANEOUS.

A CAR-LOAD of implements has been shipped by Mr. Watson, of Ayr, to Aberdeen, Scotland.

THE Keewatin Lumbering Company are at present shipping eight to ten car loads of lumber per week from Rat Portage to Winnipeg.

AN unusually large quantity of deals and other lumber has been shipped from Herbert River, N.B., this season.

MESSRS. BICKELL & WICKETT are going to build a tannery in Toronto, near the mouth of the Don, and the Council has promised to exempt the property from taxation for a term of five years.

A NEW steamship is building on the Clyde for the Dominion Steamship Company, which it is stated will exceed the burden of the Allan steamship *Parisian* by three hundred tons. The name of the new craft is to be the *Vancouver*.

BY an accident with a circular saw, Mr. W. Craig, foreman of Stevens, Turner & Burns, London, had a finger taken off, and a fellow-workman namad D. Bradley had three ribs broken by a flying piece of board from the saw.

BUSH fires have been doing considerable damage in several places in Quebec; not only has valuable timber been destroyed, but a great deal of fencing and in some cases farm buildings have become a prey to the flames.

THE *Scottish American* says: In New York State the replanting of forest trees has been attended with very good results, and it is noted that in one belt of country where replanting was general the rainfall has largely increased. In Kansas and Nebraska the results obtained from replanting are even more striking. The planted forest serves to break the force of the wind, and the influence of the woods' growth is seen in lessened periods of drought, and an increase in crops.

WHEN DOCTORS DISAGREE WHO SHALL DECIDE? The people often decide by "throwing physic to the dogs," and trying BURDOCK BLOOD BITTERS, and the result is always satisfactory. Burdock Blood Bitters is the *Multum in Parvo* of medical science, curing all diseases of the Blood, Liver and Kidneys. A trial bottle only costs 10 cents. A dollar bottle may save you many dollars in doctor's bills.

DYSPEPSIA.—Strenthen your digestion—tone the stomach for utilizing and assimilating every atom of food you take; the body needs it for strength and vigor. *Zopesa* cleanses the entire system, stimulates the Liver, keeps you regular, and able to eat ten-penny nails. Letters and postal cards come in daily, telling of cures and help frem *Zopesa*, from Brazil. *Positive proof* of the health and vigor it gives in a ten cent sample. Ask your druggist.

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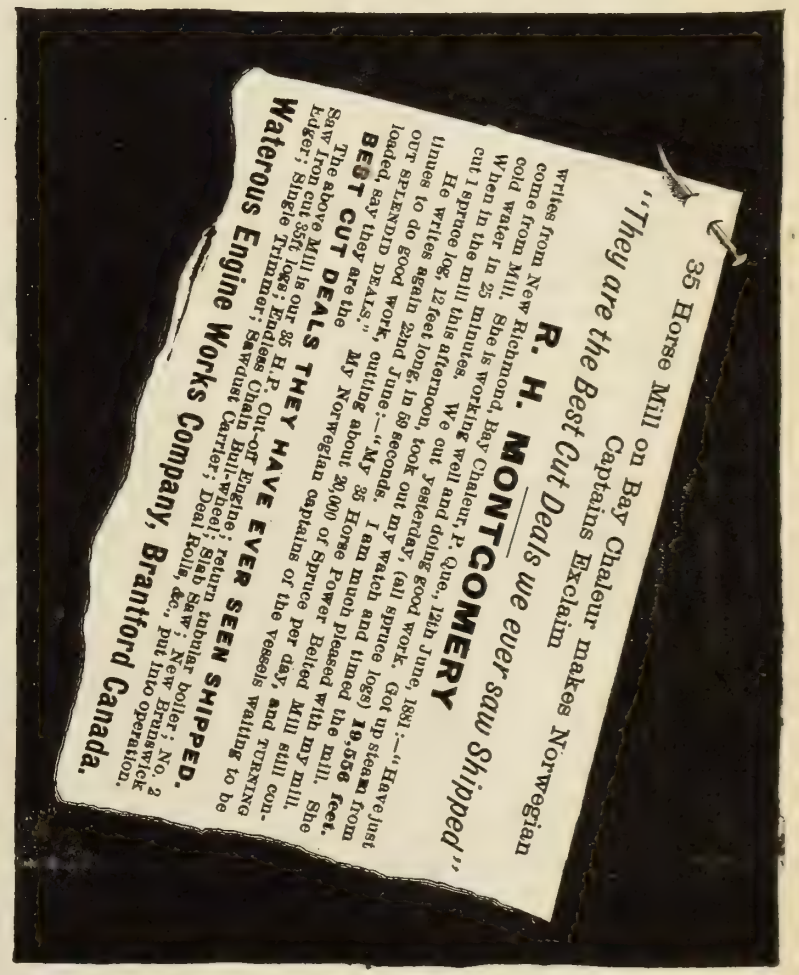

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THE TRADE AND THE PUBLIC.

It is a peculiarity of all class periodicals that in advocating the rights of the interest they undertake to represent they seem to give themselves no concern about the public good, as if that might be left to take care of itself. One might almost fancy their objects were antagonistic, for, while the one is always lamenting when low prices prevail, the other rejoices in getting its commodities as cheaply as it possibly can, and people may be said to trouble themselves very little about the cost of production of the article they want, when they go to market to lay out their money to the best advantage.

What avails it that the dealer can show that he is offering his goods at the merest shadow above cost price, if the man over the way is willing to sell a similar and equally good material at a still lower figure? Ever since the second Sir Robert Peel's time, when he became the advocate of free trade (having previously opposed it with all his might), and gave out his celebrated precept, as if it were a happy thought to which he owed his conversation, that it was a first principle of trade "to buy in the cheapest market and sell in the dearest," all idea of taking into consideration the expenses incurred in producing the material we are inclined to deal in has been abandoned, as an exploded weakness with which free trade has no sympathy.

But there was nothing original in Sir Robert's plausible phrase, which became popular merely because he had uttered it, as a novelty, and it was taken up and repeated as the essence of wisdom which embodied in a few words the whole doctrine of free trade, and left nothing more to be said about it. It had, however, long before been practically adopted by those branches of business which the police are supposed to keep an eye on, and of which we have a well-known representative in the character of Mr. Fagin, the amiable patron, erewhile, of Oliver Twist, and that class of trader might almost justify his calling by proving it to be in strict accordance with Sir Robert Peel's rescript, and possibly its tendency has been in some degree to demoralize trade. We may be less scrupulous in looking for cheapness, as a sort of duty enjoined upon us by this modern law of trade, which does not suggest to us the necessity of ascertaining how the goods we are in pursuit of came to be so cheap. That duty is left to the teaching of the statutes at large, if people choose to run the risk of them, and place implicit confidence in the honesty of the seller, without asking any inconvenient questions as to his rights of proprietorship in the commodity he is willing to dispose of so much below the market price. And there is always the chance of escaping ill-consequences by appealing to Sir Robert Peel's apothegm. It is easy to plead that unless you "buy in the cheapest market and sell in the dearest"—that is, the dearest market available—business cannot be done at a profit under free trade.

If it has not lowered the standard of trading morality in some appreciable degree, at all events the term "connection," as applied to business, seems now-a-days to have a different meaning from that which it formerly possessed. In past times the word was understood to mean certain parties who dealt regularly with a certain house for certain goods, and mutual dealings in this way often continued for a lifetime; now it means little more in a general sense than correspondents and dealers you are known to, and with whom you have an occasional transaction when they cannot get the goods a fraction cheaper elsewhere.

Fortunately, however, in the timber trade we are less exposed to malversations of this kind than in almost every other. The bulkiness of the wares is a sort of guarantee for integrity in the manipulation of them. They cannot be hidden away in bags, boxes, or barrels, and pass muster in transmission as something totally different. There they are, conspicuous to all the world, wherever they go, indifferent to comment and criticism, and entirely independent of it.

Neither is the apparent neglect of the public's interest so real as at the first it might be accounted in treating only of the advantages to trade. The desire to see prices kept up to a fair paying level arises from a conviction, not necessary to be constantly obtruded, that it cannot be good for the community at large that any important and legitimate trade should be carried on at a loss. A price may be very moderate and yet be a paying one; on the other hand, it may seem rather high and yet the sellers may be getting nothing by it. Such has been the state of the timber trade in many parts of Britain latterly, where wholesale transactions have borne no profit because too much was paid at first hand, in comparison of the plentifulness of the supply, to bring the commodity to market. The duty of the journalist who has undertaken its cause is then to call the attention of the trade to this state of affairs by pointing out the sources of its difficulty, collecting and submitting to them the facts that bear upon it, and suggesting how the evil may best be mitigated. But in all this there is no implied disregard of the good of the public, who are supposed to gain what the trade is losing. There is nothing of the spirit of monopoly and desire to obtain more than the fair value of the goods brought forward, and for the rest the public is well able to take care of itself, and requires no special pleader to teach it how to make the hardest bargains, as we have intimated, without taking conscience at all into its calculations.

There is a disposition in fashion to insist that a fair day's work should be supplemented by a fair day's wages, but no one agitates for a fair profit to the man whose goods are fairly paid for. He must take his chance in the market against another who has perhaps not paid for the commodity he is selling, and never means to. Such are the *impedimenta* which come between a trader and his just expectations when he thinks he has laid out his money well, and is looking that it should yield him a reasonable return.

These thoughts have been suggested to us by the apparent necessity we have latterly been under of always harping on the same string. We look in vain for some encouraging news from the provinces, as to the solid revival of the trade for which the importers are waiting. If any of our correspondents speak cheerily, it is mostly after the manner of Captain Cuttle, at the *Wooden Midshipman*, in Leadenhall street, when he rubbed his hands, and thought business looking up, because somebody called and inquired the price of a pair of spectacles. The trade continues languid, and without hope of immediate improvement, though the manufacturing industries are reported as doing better than they were a little while back. Liverpool, Hull, Grimsby, Hartlepool, and Newcastle are all in suspense, and have no faith in obtaining satisfactory prices for the new arrivals, which are already coming forward in rather formidable proportions (especially in Liverpool), though they have not as yet materially affected home prices, because their effect was previously discounted, and people refrained from extending their orders abroad till they saw how their market would bear the new strain on them of their first importation.

On the other side of the Atlantic they are more hopeful of this season's trade than they are here, and our Chicago correspondent's letter (June 11, p. 361) draws a bright picture of the prospect before it out there, but not without a suggestion that the cutting of logs may be superabundant.

"A considerable increase is looked for by many in the amount of lumber turned out, as compared with the cut of other years. The majority of operators favor this view of the situation, and look for an abundance of lumber, though not more probably than the demand will call for."

The season has, it seems, been very favorable for getting the timber clear of the drives, and there is no anticipation of any difficulty in bringing the logs forward, as we learn from the concluding paragraph of the letter aforesaid. All idea, therefore, of any curtailment of our supply for this year has completely vanished, whether it be from Northern Europe or from America, and in its place a strong impression is gaining ground that our markets will be pretty severely tested on all sides.

In Liverpool it is expected that steamers will take a lead, even in the Atlantic timber trade, this summer, and as they will run at very moderate freights the shippers on that side are not unlikely to charter on speculation in the absence of orders; as in the worst case they will only have to hold stock on this side, instead of at home, with the chance of disposing of it during the winter, when if unshipped it would have to lie idle and useless until the following spring. It is the uncertainty which pervades the trade on these points that has kept it so quiet and unspeculative so long.

If the public gains by this kind of business, the trade does not like it.—*Timber Trades Journal.*

PRACTICAL ITEMS.

Loose pulleys require constant attention and much oil, and are very hard on the belt. It is best to have them a trifle smaller than the tight pulley, and with a step or flange running up to the diameter of the tight one. This takes the strain off the belt and the friction from the pulleys.

Where a mill is driven by mortise gearing, it has been recommended to use a mixture of pulverized chalk and linseed oil, for lubricating purposes. It is said that this mixture is much better for wooden cogs than oil, tallow or flour. The chalk for this mixture should first be pulverized and then sifted with a fine sieve.

Any sharp steel will cut glass with great facility when kept freely wet with camphor dissolved in turpentine. A drill may be used, or even the hand alone. A hole may be readily enlarged by a round file. The ragged edges of glass may also be thus smoothed with a flat file. Flat window glass can be readily sawed by a watch spring saw, by the aid of this solution. In short, the most brittle glass can be wrought almost as easily as wood, by the use of drilling tools kept constantly moist with camphorized oil of turpentine.

Ordinary white wood can be given the appearance of the finest black walnut. The wood first thoroughly dried and warmed, is coated once or twice with a strong aqueous solution of extract of walnut peel. When half dried, the wood thus treated is brushed with a solution compound of 1 part (by weight) of bichromate of potassa in 5 parts of boiling water, and after drying thoroughly is rubbed and polished. By this treatment, the color is said to be fixed in the wood to the depth of one-twelfth to one-sixth of an inch, and in the majority of cases the walnut appearance is declared to be very perfectly imitated.

So eminent an authority as Professor Sweet says, in reference to the question of economy by reduction of friction, that of two systems, one offering a saving of 10 per cent. by reduction of friction, and the other 20 per cent. in the use of steam, he would take that which led to a saving in friction, which of necessity implies saving in maintenance, attendance, repairs, delays, etc. The loss by attendance, repairs and delays is greater in small engines than in large. To get economy in friction, there should be generous wearing surfaces, well fitted, and properly lubricated, and the engine should be in absolute alignment. We often find shafts which are set in perfect line and remain so when at rest, but which are deflected by the strains put upon them while at work.

The *American Architect and Building News* says that maple is unquestionably better than the average yellow pine for flooring. It is very fine-grained and tough, though perhaps no harder than yellow pine, and is completely free from the liability to splinter, which injures much of the latter. Some years ago a number of Boston mill-owners made thorough tests o various kinds of material for flooring their factories, where the wear is very severe, and concluded that maple was superior to any other. Very possibly this experience may have led to the favor with which maple house-floors are regarded in that region.

Fourteen years ago a Mr. Sterling, of Monroe, Michigan, placed two gate posts of white oak in front of his residence. When they were set he bored into the top of each with an inch and a half auger a hole three inches deep, filled it with common salt, tightly plugged it, and coppered the posts. Having occasion recently to change the location of the posts, he found them as sound from top to bottom as the day they were planted.

HOW FORESTS PRODUCE MOISTURE.

Dr. Franklin B. Hough, United States Commissioner of Forestry, gives the following explanation of the effects of forests on moisture: It is a matter of common remark that our streams diminish as the woodlands are cleared away, so as to materially injure the manufacturing interests depending upon hydraulic power, and to require new sources of supply for our state canals, and for the use of cities and large towns. Many streams once navigable are now entirely worthless for this use. The mode in which this influence operates will be readily understood when we consider the effects of forests upon the humidity and temperature of air.

A deciduous tree, during the season when in foliage, is constantly drawing from the earth, and giving off from its leaves a considerable amount of moisture, and in some cases this amount is very great. This change of state from a fluid to a gaseous condition, is a cooling process, and the air near the surface, being secured from the sun and from the winds, becomes, by this means, so humid that a rank, succulent vegetation often springs up and thrives, which in an open field would wither and perish in an hour. The air being thus charged with moisture and cooled, does not take up by evaporation the rains which fall, and the soil, being more open, readily allows the water from melting snows and from showers to sink into the earth, from whence a portion appears in springs and in swamps, which give rise to rills and streams.

The air at all times holds more or less watery vapor in suspension, and its capacity for doing so is increased as the temperature is raised, not by a steadily gaining rate, but more rapidly as the heat is increased. There can be no evaporation when the air is saturated with moisture, and no deposit of water in any form until the temperature is reduced to the point of saturation. It is not yet determined as to how far the cooling and moistening influence of a grove may extend. It must depend upon many circumstances, and especially upon the slope of the surface, and the direction of the winds. The effect is often apparent to the eye from the freshness of the herbage in adjacent fields for many rods in width.

The effect of woodlands in retaining snows where they fall, and in delaying their melting in the spring, has been everywhere observed in snowy countries. In such localities the snow cannot be drifted by the winds, and when it melts is disappears slowly, sinking into the soil rather than flowing off upon the surface. The effect of this delay in checking a too-early appearance of fruit blossoms, cannot be mistaken. The result is in fact similar to that of considerable areas of water, such as our northern lakes, along the borders of which, especially on the lee-side, fruits are found to flourish with the greatest success. In a country interspersed with clumps and belts of woodlands, the snows drift less, and their melting more evenly over the surface cannot fail to be beneficial to the interests of agriculture, and more especially to meadows and pastures.

HEMLOCK RAILROAD TIES.

During November, 1866, the Rock Island railroad laid 2,000 hemlock cross ties that had been saturated with chloride of zinc in the road bed of the main line, some three-fourths of a mile west of Englewood, as an experiment. Last Saturday these ties were examined, and several of them brought to the company's office in Chicago. Some of them were found in good state of preservation, while others that had been rejected were found sound within, but were rotten on the surface where exposed to the wet. Hemlock is considered very poor as regards its preserving qualities. It is also claimed that it usually commences decaying in the center. Near these hemlock ties were some oak ties that were laid in 1873, some of which were badly decayed. Upon these specimen ties had been laid at the same time steel rails from England, where they still remain, they also having been placed there on test.

THEY ALL DO IT.—Everybody uses "TEABERRY" for the teeth and breath, the newest, brightest, cosiest little toilet gem extant. Try a 5 cent sample.

RAFTING OPERATIONS AT THE FREDERICTON BOOMS.

THE LUMBER CUT ON THE ST. JOHN AND ITS TRIBUTARIES.

One of the grandest sights to be seen in the Province and one that would well reward a journey of many miles, is the enormous mass of logs, estimated at over 50,000,000 feet, at present lying in the new boom of the Fredericton Boom Company at Sugar Island, above Fredericton. A fine view of the logs can be obtained from the Keswick bank, which, at this point, rises to a considerable height above the level of the river. Competent judges pronounce it to be the largest mass of logs ever collected together on the St. John. The logs lie in a natural pocket, the sides of which are formed by the mainland and the Island shore, with the base resting upon and being supported by enormous piers built up from the flat rock bottom of the river, a height of 28 feet, the larger ones being each loaded with over 150 cords of stone. There are some 14 piers all told, including side piers to which booms are hung to keep the logs off the low parts of the Island shore, and a few supporting piers on the main shore. The breaking up of the ice at an unusually early period last spring, prevented the completion of all the proposed piers, and it was feared by some that the boom would, therefore, prove too weak to hold the great run of logs, but these fears fortunately turned out to be groundless, though the boom was tested by one of the greatest freshets ever known on the river. When the grand rush of logs came, the current was so strong that after the boom had partially filled the logs began to "run under," and at such a rate that for three days there was little or no increase on the surface, million after million disappearing from sight as soon as they touched the edge of the jam—the consequence being that the logs as they now lie in the boom are piled to a depth of twenty-five feet. Had the water risen above the tops of the piers the booms would have been torn away and the great mass of logs, thrown into the current, would have swept all before it, wrecking the old Fredericton boom miles below, and strewing the shores of the river on down through Sunbury and Queens. As it was, the water came within a few feet of the top of the piers, which, though built on the flat sand-stone bottom of the river, were so strongly constructed and heavily weighted with stone that they nobly withstood the enormous and somewhat unexpected strain. It is the intention of the agent of the company, Stephen Glasier, Esq., under whose personal direction this boom (as well as all the others along the river) was constructed, to further strengthen it next winter, and to raise the piers five feet higher. The boom space at Sugar Island is from two to three miles long, and, if required, 100,000,000, or double the amount now in the boom, can be held there. The logs are conducted into the Sugar Island boom from the natural channel of the river by means of Pond's sheer booms, an invention that has to a great extent

REVOLUTIONIZED THE RUNNING AND DRIVING

of lumber on the St. John. Formerly the logs floated down with the current, great numbers being deposited on low lands where they were left high and dry by the receding freshet, only to be removed later in the season by the "stream drivers" with great labor and at considerable expense. In addition to the delay thus caused in getting the logs to market, the log owners had to indemnify the farmers for the damage to their intervale and island lands caused by the deposit and removal of the drift logs. Now, sheer booms, placed at various points along the upper St. John and its chief tributaries, keep the logs in the current of the river and carry them by the low lands, on which they would otherwise lodge. Not only is the work of stream driving thus reduced to a minimum, but the logs are hurried on to the Fredericton booms, and consequently to market, at a much earlier date than by the old method. The almost simultaneous arrival at the booms of the great mass of the cut on the upper waters has necessitated a radical change of operations on the part of the

FREDERICTON BOOM COMPANY,

which has been successfully carried out this season on a large scale. In former years the several booms below Fredericton on the Lincoln and Maugerville shores were sufficient to meet the demand, the first run being rafted so as to make room for successive arrivals, but when the drives began to come in more rapidly it was found necessary to provide more extended boom facilities. The old boom ground had been well chosen, though despite all precautions the booms were occasionally broken by the pressure of the run of logs in the spring, supplemented by high winds and heavy freshets, entailing an outlay for the recovery of the logs along the shores of Sunbury and Queens that materially reduced the profits of the company. There were other localities, of course, that might have been chosen for the booms, less exposed to the rake of the wind and sweep of the freshet currents, but they lacked one great essential—the current would carry the running logs away from, instead of into them. But even this seemingly insurmountable obstacle has been met and overcome by the application of Pond's sheer booms, an invention whereby the course of running logs can be directed towards either shore at will, despite the set of the current. After a series of experiments with the sheer boom, it was decided to locate a large boom on the Douglas shore, between the island and the main land, into which logs could be directed by a sheer boom placed at the head of the island. This boom is attached to thirteen jam and seven sunken piers, is about two and a half miles in length, and will hold nearly forty million feet. This venture proved to be a decided success, proving conclusively that the company acted wisely, when enlarging their facilities, in selecting a site at Douglas. Rafting operations were carried on there with great rapidity last summer, the only drawback being the delay caused by the unusual lowness of the water at one time. In addition to the booms there, the company put up suitable buildings for the accommodation of the men, a cook house, stables, business office, &c.

The addition of the Douglas boom enabled the company to successfully catch, hold and raft all the logs cut for the past two or three years; but the indications of an increased output for 1881 lead the company to make a still further enlargement to meet the requirements of this season's operations. To this end, the boom at Sugar Island, above described, was constructed last winter, and it has proved to be one of the best moves ever made by the company.

THE SEASON'S WORK.

The operations of the Fredericton Boom Company this season have been on an unusually large scale. They have, so far, received some 125,000,000 ft., divided as follows: 50,000,000 in the Sugar Island boom; 30,000,000 in the Douglas boom, and the balance in the Gill, Glasier, Sterling and Mitchell booms, below Fredericton. Some idea of the extent of their operations may be formed when it is stated that it is about 18 miles from the foot of the Mitchell boom in Lincoln to the head of the boom at Sugar Island. None of these booms in any way interfere with the free navigation of the river either above or below Fredericton. The company employ some 250 men this season, including drivers and sheer boom men. Rafting operations are carried on at Douglas, where 200 joints per day are made up, and at the Mitchell boom, below Fredericton, where the day's work averages about 140 joints. One hundred men are working at Douglas and about eighty men at the Mitchell boom. The logs in the Sugar Island boom will be run down to the Douglas boom, some little distance below, and rafted there as fast as possible. The Douglas boom is so constructed that rafts from the Keswick, at its head, can be floated down through into deep water below, for towing to market. It is expected that all the logs in the Mitchell boom will be rafted in about a week, when the crew of rafters will be transferred to the old rafting ground at the Glasier boom. The entire operations are in charge of Stephen Glasier, Esq., the veteran agent of the company, and so far this season without the loss of a single log.

It is estimated that there are about 20,000,000 yet to come down the river, though much more is hung up high and dry by the sudden fall of water in the main river and tributary streams.

OTHER OPERATIONS.

Mr. Alex. Gibson has done a heavy business on the Nashwaak during the past winter, confining his operations exclusively to that section. It was thought that he would get out some fifty millions, but the actual output will fall short of that figure. Finding the spruce dying out in one locality, he concentrated a large force there, having 90 span of horses hauling out to one landing, though over two roads. He has the Nashwaak so well provided with dams that he can get water enough to carry down his logs at any time desired. This season all his logs were got out early. They are being sawed at his mills on the Nashwaak, and at Morrison and Robinson's mills below Fredericton.

The output on the Keswick river this season is estimated at about five millions, all of which will be rafted on that river.

A careful estimate, based on the most reliable information, shows that independent of Mr. Gibson's operations, about two hundred million feet have been cut on the St. John and its tributaries during the past winter.

The tugboats of Messrs. D. D. Glasier & Son are all at work towing rafts down to this port.

The water is unusually low for the time of year, much to the annoyance of operators on small streams.—*St. John Sun.*

NEW INDUSTRIES.

Two gentlemen intend to apply to the Council at their next meeting for exemption for a term of years for an extensive tannery which they propose establishing in Toronto.

It is expected that in about four months an important new industry will be in full running order in this city. An application has been made for a charter to incorporate the "Toronto Grape Sugar Company," having a capital of $200,000, the applicants being the Hon. Thomas N. Gibbs, Oshawa; Messrs. James Michie, John Leyes, James McGhee, James S. Holt, Toronto; and E. P. Stikes, Buffalo. Plans are being prepared for a factory with a capacity to use 2,000 bushels of corn per diem, and so arranged that it could be enlarged to a capacity of 5,000 bushels. The factory will be erected on the Esplanade, on the water lots granted by the City Council three weeks ago to Mr. Holt for that purpose. Arrangements will be made so that corn and coal can be received direct into the factory from all the railways or by boat on the water side, and goods will be shipped in the same manner. The refinery will be eight stories high, with an elevator tower on top, and will be built of brick with stone foundations on piles driven into the rock. To get the buildings erected as rapidly as possible the electric light may be used, so that building operations may be carried on both day and night. The company will employ about 150 hands, and the best skilled experts have been secured. The latest patents and improvements will also be introduced. The property has been exempted from taxation by the City Council and a 21 years' lease of the water lots, 133 feet by 375 feet, obtained at a nominal rental.—*Toronto Globe.*

Two Thousand Dollars.

The easiest, cheapest and best way to secure the above amount is to apply for membership in the Mutual Benefit Association of Rochester, N.Y. Pay Dr. S. B. Pollard, 56 Bay Street, one dollar for four medical examinations, he will send your application to the head office, if you are accepted as a member they will issue a certificate of membership, which, on payment of eight dollars, entitles you to full benefits as a member, should you die to-morrow, next day, next week, next month, or any time within three months, this Association will pay to your heirs, or assigns, the sum of two thousand dollars. At the expiration of the three months all you have to do is to pay your pro rata amount, which is from 20 to 75 cents on the death of some other member, who has done nothing worse than to die during the three months just past. By paying your assessments on deaths, you keep your certificate alive, and at the commencement of the second year you are assessed two dollars per thousand to keep up office expenses, etc., for the next year. No easier, surer or better schemes to carry two thousand dollars has ever been devised than the Mutual Benefit Associates, of Rochester, N.Y.

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which has NEVER BEEN BEATEN YET, and am prepared to allow the Agents commission—FIFTEEN PER CENT—on all purchases. L17tf

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Peterborough, Ont., June 13th, 1881.

Travelling Agent.

MR. A. L. W. BEGG has been appointed agent for the CANADA LUMBERMAN, and is authorized to collect subscriptions and grant receipts therefor and to make contracts for advertisements appearing in its columns.

The Canada Lumberman

DEVOTED TO THE LUMBER AND TIMBER INTERESTS OF THE DOMINION.

PUBLISHED SEMI-MONTHLY BY

TOKER & Co. PETERBOROUGH.

Terms of Subscription :

One copy, one year, in advance	$2 00
One copy, six months, in advance	1 00

Advertising Rates :

Per line, for one year	$0 90
Per line, for six months	50
Per line, for three months	30
Per line, for first insertion	10
Per line, for each subsequent insertion to 3 mo's.	05
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Communications intended for insertion in the CANADA LUMBERMAN, must be accompanied by the name of the writer, not necessarily for publication, but as a guarantee of good faith. Communications to insure insertion (if accepted) in the following number, should be in the hands of the publishers a week before the date of the next issue.

PETERBOROUGH, Ont. JULY 15, 1881.

THE Ottawa *Free Press*, in speaking of THE CANADA LUMBERMAN, says :—"It is a splendid industrial publication, devoted mainly to the lumbering business."

LUMBER is very firm at Davenport, and some lots are sold above present list; a few days of dry weather and the advance will become general on all common or low grades.

A MINNESOTA lumberman estimates that Manitoba alone will take 40,000,000 of lumber from that state this season. If that proves to be so, our friends of the saw in the west must be having a good time of it.

EASTERN buyers are reported as operating largely in the west just now, and are securing all the lumber they can in Michigan at an advance of from one to three dollars per thousand as compared with the prices ruling in January 1880.

THE *Northwestern Lumberman* is our authority for stating that manufacturers and buyers in the west have discovered that the lumber made from maple logs cut in winter and sawn before the 1st of July, is worth $2 a thousand more than if the sawing be done after the date named.

THE yards throughout St. Louis all report a fine trade, with brilliant prospects for the future. Figures on white pine grades are very firm, with a strong tendency toward advance. Quotations on yellow pine are very low, and still falling. The advance of from 50c. to $1 per 1,000 feet on white pine in Chicago, and a change will naturally be followed at St. Louis in the next ten or fifteen days, if not sooner.

A STEAM MILL is to be erected at Wood Point, by the Bay of Fundy Quarrying Co. The building will by 60x40, the engine 60 horse-power. It is the intention of the Company to saw dimensions and other lumber for the Boston and New York markets, to be shipped with their cargoes of stone.

FROM Manchester, N.H., we are informed that there is a large increase in the lumber trade in that section this year as compared with former years. Local mills are doing a large trade in hemlock and spruce which are still to be had in large quantities in the northern part of that State and in Vermont, while their chief supply of cedar shingles come from Sherbrooke, Quebec, and retail at $3.50 to $4.25 per 1,000.

MR. J. R. BARBER, of Georgetown, has paid the membership fee of the Mechanics' Institute of that town for forty of his employees. This is certainly commendable, and we know many employers who would not miss the amount thus expended. Indeed we are quite sure that if more encouragement were given young men there would be less carousing and drinking and more work performed.

WE have been aware for some time that negotiations were pending for the sale of the entire lumbering property of Messrs. McDougall & Co., Harwood, to Mr. R. C. Smith, of Fenelon Falls, and we are now in a position to state that the sale has been completed, and that Mr. Smith is now in full possession. We also understand that Mr. Smith has some idea of transferring the machinery now in the mill at Harwood to the French River, where he owns extensive limits.

A LARGE lumber business is being carried on by parties in Bridgewater, Nova Scotia. Messrs. E. D. Davison & Son's two mills will cut during the season 15,000,000 feet of lumber; Dufus & Co.'s mill at Summerside will cut 6,000,000; C. H. Chase expects to cut 2,500,000; Alex. Nelson will cut 1,000,000 ft.; Jas. A. Curll expects also to cut 1,000,000 feet, a total of 25,500,000 feet lumber, a gain of about eight per cent. This gives employment to 700 men, and supports 3,000 people. This is good for the County of Lunenburg.

OUR readers will have noticed that for some time past the universal cry from Britain has been a dull and drooping timber market. Notwithstanding that every market, except those depending upon the British market, on this side of the Atlansic has been firm with a decidedly upward tendency. Under such a state of affairs is does seem to us somewhat strange that our eastern shippers, and especially those of New Brunswick, do not turn their attention to the "booming" markets in the Eastern States. Even if they netted no more money by shipping to the latter market than they would by shipping across the Atlantic, such shipments would relieve the British market from its present glutted state, and doubtless secure for them better prices for what they did send there.

THE lumber business of McGraw & Co., at Tonawanda, has been transferred to the Export Lumber Company, (limited) of 87 Wall street, New York, having been purchased by that con cern. The company is a very extensive firm, and one of the largest buyers in the eastern market, and Tonawandians are jubilant over the acquisition to their business interests. The company possesses a capital of $150,000, and transacts mostly an export business, as its name indicates. It has leased, for a number of years, from the McGraw estate, the eligible and desirable docks and river front owned by them at Tonawanda, giving it excellent facilities for receiving lumber or forwarding it, either by rail or canal. The concern has bonded yards at Hunter's Point, Long Island, and Hochelaga dock, Montreal, in addition to its New York branches, and its fine property in Tonawanda. The yards at Tonawanda will be stocked up at once with the product of the western mills. Mr. Mackintosh is to be the local manager, and has already entered upon the duties connected with his position, and assumed control of the business.

EXPLORATIONS ON THE UPPER OTTAWA

We learn from the Toronto *Globe* that about the 20th of June Mr. Niven, P.L.S., of Haliburton, was despatched on an exploratory survey of the country north of Lake Nipissing. He took with him two exploring parties, and expects to occupy about three months in the work. The district to be explored commences about twelve miles north of the lake, and extends northward to Lake Tamagamingue, which lies half way between Lake Nipissing and Lake Tamiscamingue, where the Ottawa takes its rise. The Ottawa on the east and Wahnapitacping and the Wahnapitac River on the west are the utmost limits of this exploration, which includes an area of sixty miles in length between these limits, by a breadth north and south of twenty-four miles. An exploration of this kind has not been made in this Province for very many years, the work of filling in the rough outlines of the early explorers having occupied the attention of the Crown Lands Department.

THE OBJECT OF THE EXPLORATION.

The question of timber limits has no doubt something to do with the exploration, but the meagre information regarding the soil and climate of this territory has been such as to lead to a desire to know something definite regarding its capacity as a grain growing district. What little is known indicates that the soil is possibly better than on the Ottawa south of Matawan, and the climate sufficiently warm for the cultivation of wheat. In the instructions given to Mr. Niven the objects of the exploration are set forth as follows :—

1. To run the outlines in a block of certain townships, to act hereafter as a base in their subdivision.

2. To ascertain by exploration as far as practicable the general nature of the soil, timber, minerals, &c., in the field of operations.

MR. NIVEN'S INSTRUCTIONS.

Many of the instructions given Mr. Niven, are on minor details, which, however important to the department, have little interest for the public. Other instructions are of a general character, leaving much to the exercise of the common sense of the explorer. It is the intention of the Government to extend through this territory the same system of survery as is in existence on the north shore of Lake Huron, and this information is a guide for the general outlines to be mapped by Mr. Niven. The departing point of the exploring party is the north-east angle of the new township of Field. From this angle a line is to be drawn due north, and at intervals of six miles posts are to be planted, and other indications made to guide future surveyors in laying out townships. Six miles north of the angle referred to a base line is to be drawn to the west, and a similar plan adopted in marking for the north and south boundaries of the townships. By a base line to the east and other lines at right anges to it, the whole district is to be laid out as a base for future sub-divisions.

Mr. Niven is also instructed to explore for six miles on each side of his base lines, and for this purpose he is to select fit men, with a good knowledge of land suitable for agricultural purposes, and of trees suitable for merchantable timber. These men are also to have considerable facility in keeping notes of their explorations, and in the use of the pocket compass. The natural features of the country are to be shown, and Mr. Niven has also to examine the rock formation, collect small specimens of fixed rocks, attaching to each a number and notting in his field-book the exact locality in which each specimen has been found. If the rock is stratified its dip is also to be observed. He is also to ascertain by ostronomical observations the latitude of different points, and, if time permit, is to sketch in the position and extent of Lake Tamagaminque.

Reading the Ads.

Our readers will find items of interest in our advertising columns. Among our regular advertisers will be found such a variety of essentials, with the various other matters directly connected therewith, that a careful perusal will in nearly every case develope something in the way of information that must become directly valuable to our readers.

THE FUTURE OF LUMBER.

So much has been written and said concerning the rapidity with which our forests are being felled in lumbering operations that it would not be surprising if corners in the wood market were, ere long, attempted. It has in a number of cases, been "ciphered out" that our timber supplies will be exhausted within thirty years, if the present rate of lumber production is maintained, some writers have even placed the evil day no farther off than twenty years. Were these croakers in a position to verify their predictions, the situation would be, indeed, alarming, but, as the trade has not as yet experienced any lack of material with which to operate, it may be assumed by outsiders, that no grave apprehensions as to the future are entertained by those most vitally interested.

That our production and consumption of lumber is enormous, must be obvious to the most casual thinker; that our present sources of supply must eventually be abandoned is freely admitted, but the *Lumber World* does not anticipate that its children's children will be compelled to forego the comfort and elegance of a walking stick, or dine off cast iron tables. It should be remembered when "exhaustion of our timber supplies" is spoken of, that pine is generally referred to, but there is yet standing in the states of Wisconsin, Michigan and Minnesota a sufficient supply to meet the demands for a great many years to come. The timbered region of Texas is also immense, while Georgia is, and has been for many years, a great lumber producing state. Even Pennsylvania has thousands upon thousands of acres of timber lands in which the ring of the woodman's axe has never been heard, and away down in Maine large amounts of lumber are being, and for many years to come will continue to be, produced. It is true that the cost of log getting is yearly increasing, owing to the necessity for going farther and farther inland, away from the rivers and streams, and, because the distance logs must be hauled before banking, is yearly becoming greater. This, however, should by no means be accepted as indicating an alarming decrease in our timber supply, but, rather, as evidencing an increase in its value.

Our importations of Canadian lumber, while already of respectable proportions, are small in comparison to what they might, and in the not far distant future, probably will be. Were it not for our protective tariff, it is doubtful if western pine would command much attention in eastern markets, and it requires no prophet to see that if western pine becomes so scarce as to advance in price, beyond the limit at which the Canadian article, paying duty, can be profitably imported, then will Canadian pine usurp and hold the position of prominence, and, as one of our contemporaries puts it, immense as the present accessible sources of lumber in Canada are known to be, recent explorations have shown that the vast solitude to the south and west of Hudson Bay is an almost unbroken forest of white and red pine and their congeners. This region, which the imagination, in default of accurate information, has pictured as the mother of icebergs and the home of polar bears, is now found to be one highly inviting, if not to the farmer, at least to the lumberman. Ice and snow for one-half the year are his hand-maidens. Through their assistance he is enabled to "skid" and "bank" his logs along the streams on which, when the spring thaw comes, they are borne without appreciable cost to the point o manufacture on the coast.—*Lumber World.*

AN iron steamship of 1,500 tons, named the *Campana*, has been bought in England and is to be placed on the Lake Superior route from Collingwood to Duluth. She sailed from London on June 27th for Montreal, is of light draft, and generally adapted for lake traffic.

SEVERAL mills owners in the County of Simcoe have been fined for allowing sawdust from their mills to get into the streams, among them are Wm. Train, Thomsonville, and Tackaberry, of Tecumseth. The former was fined twice.

B. YOUNG'S saw mill at Apple River, N.B., was burned two weeks ago, with some lumber in proximity. The sleds and camps in the woods, used by the men, were fired at the same time. Incendiarism is believed to have been the cause.

IDLE CAPITAL.

La Minerve, of Montreal, calls attention to a very important question in the general interest. We refer to the very large amount of capital which has accumulated and is actually lying idle in our banks. And as our contemporary remarks, the evil continues to steadily increase, the deposits largely exceeding the amount of the paid up capital and revenue and constituting nearly the half of the general fund of our banks. According to the last report the state of the Quebec and Ontario Banks stood as follows:—

Capital paid up	$63,580,360
Notes in circulation	24,974,693
Deposits	83,830,645

The first of the above sums is the exclusive property of the banks themselves, and the shareholders are interested in its management. But the administration of the remainder is a subject of general interest; for the country at large is concerned in the deposits and circulation. It appears by the bank statements to the end of December that more than half of the general fund of the banks is held in reserve by them, or something more than the deposits. It is very much to be desired that a portion at least of this enormous amount of idle capital should find employment to benefit the country. We here touch upon a very great and delicate question—the monetary circulation. Can we believe that the hard times have passed away altogether, while so much money is laying idle, so to say, held captive by fear or the lack of advantageous issues? With prosperity already returned, what would be the state of affairs if all our resources were brought into play. It is true that the banks have only a limited control over deposits and that it was only with difficulty that they can touch them. And the proof that they hardly ever do so, and that they are always ready to pay them on call is to be found in the largeness of their reserves. In reality, these moneys are private property, only placed there as a measure of safety, and its owners would not allow the banks to risk it in an industry which they do not dare to invest it themselves. In the merntime, what might not be done for the good of the country with these vast hoards? It is to be hoped that as industry increases, confidence in industrial investments will revive and our capitalists will more largely place their money in them, instead of locking it up in the banks or converting it into bank shares.—*Quebec Budget.*

TRADES' UNION DESPOTISM.

It is practically demonstrated that the Trades' Union organization, so far as to increase the wages of employes, is a dead failure. The loss by strikes to the individuals is very serious in many families, and to the country at large it is enormous. Any effort that shall wipe out this heresy and open the eyes of the blind will be a great blessing. If manufacturers and employers generally would consult the interest of all concerned, by agreeing on a course of combined action to resist this most oppressive despotism, they would do a great service. Suppose first, that they would resolve to *give a preference* to non-union men in employing operitives, and suppose, secondly, that they would give as wages *ten per cent. more* to non-union men than to those belonging to the union. Non-union men are preferable, because they are not liable to be called off from work at any time when a strike is ordered. They are *their own masters*, and can stop work when they think best and not at the dictation of others. Look at the present strike in the city of New York—hundreds walking the streets, and instead of getting $10 to $20 per week, *get nothing* but a pittance handed to them as an act of *charity!* Instead of earning their support by honest work, they are lounging and others work to feed them! In fact, they fill the bill as first-class *paupers* instead of honest, industrious mechanics.

When men can lift themselves up by their thirt collars, then they may be able to increase their wages by joining unions. Supply and demand will ever, as it always has, fix the price paid for labor. It is inevitable, and the most ingenious combinations cannot prevent it. The door in this country is opened very wide to the industrious. On every hand industry is assured a good living, if not "roast beef and plum pudding every day," sufficient that is good and wholesome. Besides, there are millions of acres of land ready to yield an abundant supply of the necessaries of life. Who are those that get up trades' unions, pretending that capital is oppressing the laborer. Capital and labor must act in unison: one is necessary for the other; in fact, labor creates capital, why then should men attempt to array one against the other? Simply from interested motives! If each individual would take care of himself and not surrender, a willing slave, to stop work at command, he would not only be better off but independent. Why sacrifice our independence and move at the bidding of others. "Men and brethren, think of these things."—*Boston Journal of Commerce.*

READER HAVE YOU TRIED every known remedy for Chronic diseases, Impure Blood, disordered Liver or Kidneys, nervous and General Debility, Constipation of the Bowels, with the manifold sufferings pertaining thereto? Have you given up in despair? Try Burdock Blood Bitters; it will not fail you. A trial bottle only costs 10 cents, regular size $1. Any dealer in medicine can supply you.

A BARGAIN—GRIST AND SAW MILL FOR SALE, paying 12 per cent. clear; price $9,000; and above percentage guaranteed. Apply to

JOSEPH DAVIES & Co.,
Lumber, Coal, & Commission Merchants,
46 CHURCH ST. TORONTO. 1yL16

Wanted.

A SECOND HAND DOUBLE EDGER; also a LATH MACHINE, both in good repair. Reply stating lowest cash terms or particulars to Box 1002, Peterborough. L10

For Sale.

A 40 INCH LEFFELL WHEEL and COMPLETE CIRCULAR RIG, all in good order, suitable for a fifteen foot head. Apply to Box 1002, Peterborough. L10

Orillia House,

ORILLIA.

New and Commodious Brick Building; best north o Toronto; splendid sample rooms; centrally located; free 'bus. b20 JOHN KELLY, Proprietor.

The Queen's Hotel,

TORONTO, CANADA.

McGAW & WINNETT, Proprietors. Patronized by Royalty and the best families. Prices graduated according to room. b20

St. Lawrence Hall,

PORT HOPE.

Is noted for its superior home-like comforts—a well kept table, equalling the best hotels in Toronto, and large, well-furnished rooms. Good sample rooms on ground flour. Walton Street, Port Hope.
b26 WM. MACKIE Propr,ietor.

Caledonian Hotel,

GRAVENHURST.

JOHN SHARPE, Proprietor. This Hotel has been newly opened out, pleasantly situated on Main Street, within five minutes walk of Northern Railway station. Bar kept with best assorted Wines, Liquors and Cigars. Every attention paid to guests. Good Stabling. 1yL15

St. Louis Hotel.

THE RUSSELL HOTEL CO., Proprietors.
WILLIS RUSSELL, Pres., Quebec.

This hotel, which is unrivalled for size, style and locality in Quebec, is open throughout the year for pleasure and business travel. b18

Queen's Hotel,

BRACEBRIDGE.

JOHN HIGGINS, Proprietor. The proprietor (late of Georgetown,) having lately purchased the above hotel,) will endeavor to make it one of the best houses in the District of Muskoka. Tourists and hunting parties will receive every possible attention. Free 'bus to and from steamboat wharf. Terms, $1 per day. b20

The American Hotel,

BARRIE, ONT.

Collier Street, Adjoining the Market.

RATES REASONABLE, CENTRAL LOCATION, FREE BUS TO AND FROM ALL TRAINS.

☞ Every accommodation for Commercial and LUMBERMEN.
L14 W. D. McDONALD, Proprietor.

Fraser's Hotel,

GRAVENHURST, ONT.

HENRY FRASER, proprietor, (successor to Dougland Brown.) Mr. Fraser having purchased and thoroughly renovated and refitted that old established hotel, so long and popularly kept and owned by Dougland Brown, in the Village of Gravenhurst, is now in a position to attend to the wants of the travelling and general public. Parties *en route* to the Muskoka District, will find "Fraser's" a comfortable stopping place. The Bar and Larder are well furnished. Convenient Sample Rooms for Commercial Men. Good stabling and attentive hostler. Free 'bus to and from trains and steamboats. b26

Northey's Steam Pump Works

BOILER FEED PUMPS,
AIR AND CIRCULATING PUMPS,
STEAM FIRE PUMPS, and
WRECKING PUMPS.

MINING PUMPS,
PUMPS SPECIALLY ADAPTED for
OIL PIPE LINES,
And CITY WATER WORKS.

No. 47 King William Street.

HAMILTON, ONTARIO.

SEND FOR CIRCULAR. L17-1y

Wrought Iron Shanty Cook Stoves

The Best Article ever offered to the Trade.

I have much pleasure in drawing attention to my **WROUGHT IRON COOKING STOVE, for Shanty, Hotel and Boarding House use.** These Stoves are made of **Heavy Sheet Iron**, the top and lining of the fire-box being of **Heauy Cast Metal** and all the connecting parts of substantial **Wrought Iron Work.** The dimensions of these Stoves are as follows:—

SINGLE OVEN STOVE

Top surface contains six 10-inch holes, with ample room between, and one oven 16 x 24 x 26.

DOUBLE OVEN STOVE

The Double Oven has a top surface containing twelve 10-inch pot holes, with two ovens, each 16 x 24 x 26. One fire-box of suitable size for area to be heated. Below will be found Testimonials from some of the leading Lumbermen, who have used my Wrought Iron Cook Stoves since I ommenced manufacturing them. They are the names of gentlemen who are well known and eliable, and will carry more weight than any recommendation of my own could do.

The Best Stove I have ever Used.

PETERBOROUGH, May 31, 1880.

ADAM HALL, Esq., Peterborough. Dear Sir,—I have used your Wrought Iron Cooking Stove in our lumbering operations since its introduction here, and have no hesitation in saying that I prefer it to any other. For durability, economy and efficiency, where a large number of men are employed, it is the best stove I have ever used. You can, with confidence, offer it to hotels, boarding houses and lumbermen.

Yours truly, THOS. GEO. HAZLITT.

The Stove for Lumbermen.

PETERBOROUGH, June 1st, 1880.

ADAM HALL, Esq., Peterborough. My Dear Sir,—We have used your Wrought Iron Cooking Stove and find it is very satisfactory for lumber operations, especially so on drives. We can recommend it highly.

Yours truly, IRWIN & BOYD,

Gives the Greatest Satisfaction.

PETERBOROUGH, June 3rd, 1880.

A. HALL, Peterborough. Dear Sir,—I have had the Wrought Iron Cook Stove, purchased from you, in constant use ever since last fall, and it gives the greatest satisfaction in every respect. I can recommend them highly to any one who is in the lumber business. Very truly yours, GEO. HILLIARD, M.P.

EVERY STOVE GUARANTEED

All the necessary TINWARE and CUTLERY for Shanties suppied at the Lowest Prices.

ADAM HALL, Peterborough.

The QUEEN'S HOTEL, TORONTO, CANADA

McGAW & WINNETT, Proprietors.

☞ Patronized by Royalty and the best families. Prices graduated according to rooms. b20

Chips.

When they build a new saw mill the first thing they do to popularize it is to send circulars around. That indicates business.

Some days ago Messrs. Hamilton & Dunlop, of Brantford, made a shipment of native wines to San Francisco. These wines are the growth of the Vin Villa Vineyard, and are becoming more popular as they are better known.

Robert Griffin, for some time in the employ of Messrs. H. B. Rathbun & Son as bookkeeper at Napanee, was arrested in Montreal on the 30th ult., on the charge of misappropriating monies passing through his hands. The deficit so far as known at the time of his arrest, footed up some $600.

It is an interesting circumstance, in connection with development of our manufactures, to learn that Messrs. Belding, Paul & Co., manufacturers of silk in Montreal, have brought to this country an experienced weaver from Coventry, the seat of silk weaving in England, and are beginning to make silk ribbons under his management.

The Messrs. Shaw, the great American tanners, have bought the Foundry block, near Woodstock, N.B., containing 8,500 acres, as well as another block north of it, for $30,000. They have bought this land on account of the hemlock trees which are growing on it. We understand that bark was lately worth on the cars in Massachusetts, $12 per cord.—*Capital.*

The pulp factory at Sherbrooke, of Messrs. Ferguson & Co., has met with marked success since its establishment, and is now running night and day, turning out thirty tons a week, nearly all of which goes to New England paper makers. Spruce lumber is used altogether for producing pulp, and the factory, which has 800 available horse-power, runs five "grinders" and three "wet machines."

A quantity of worsted combing machinery is being put into D. McCrae & Co's factory at Guelph, which is to work on Canadian wools. These machines are very valuable and have been brought from Great Britain specially for manufacturing yarns of the Canadian long wool, which formerly had to be sent to the United States to be made up. In order to make room for the new machinery the offices of the firm have been removed to an adjoining building.

Prof. N. H. Winchell, state geologist of Minnesota, estimates the amount of pine lumber suitable for manufacturing, still standing in that state, at 5,760,000,000 feet. This includes the several Indian reservations, on which are many millions of feet of excellent pine, and a tract on the Big Fork river, whose waters are now drained into the Rainy Lake river, and it seems from the facts obtained, the 250,000,000 or 300,000,000 feet on that stream, Bowstring Lake and the tributaries thereto, may be floated down the Mississippi.—*Lumber World.*

Messrs. A. W. Ogilvie & Co., of the Glenora Mills, Montreal, have just completed rebuilding their extensive mills on the Lachine Canal, and have adopted the new Hungarian Roller process in its entirety. The plans were made by Messrs. E. Pallis & Co., of Milwaukee, who have fitted out a large number of mills in the States, and the mill contains sixty-six of the new roller machines, with all the accompanying appurtenances, affording a capacity of 750 barrels a day. The Messrs. Ogilvie are erecting a mill at Winnipeg, intended to be a counterpart of the above.

The business of the Grand Trunk Railway was never more active than now, especially the portion of its lines in Western Ontario. A Stratford paper of last week describes the situation as especially lively on Tuesday, which, it avers, was the heaviest day ever known on the road. In addition to the regular trains between Sarnia and Stratford, there were 19 special freight trains, the total number arriving at and leaving Stratford station during the 24 hours being 144, of which 27 were passenger trains. This averaged one for every 23 minutes, and there was not an hour's detention, a record unprecedented for a single track, and creditable to the staff who handled such a bulk of traffic so expeditiously.

RE-SAWING LUMBER.

There is yet to be further improvement in the manufacture and distribution of lumber in this country, and there are some reasons for expecting it will come in the adoption of the English system of cutting timber into deals and the re-sawing nearer the point of consumption. While wood is so abundant and comparatively cheap as now, the present plan of cutting at the forest mills lumber of all the thicknesses desired in consumption will probably be continued. But when timber becomes scarcer and advances in price correspondingly, it will not do to waste one-fourth of the wood in cuting it into inch boards. Thinner saws will be required; saws cutting with greater regularity as to thickness and securing a surface that will not have to be cut away so much in planing. The circular saw, with its quarter inch set, its wasteful kirf and production of rough and furrowed surfaces, will be laid aside except for slabbing, and the gang saw alone be used in the forest mills for producing plank deals or cants. These will be transported to the lumber marts, or points of distribution, and re-sawed with the thinner and most perfect saws which can be produced. Every sixteenth of an inch sawed in the width of the kerf saves one thousand feet of lumber in every sixteen sawed. Another reason which will demand the production at the forest mills of deals instead of lumber cut to the various thicknesses in use, when timber shall become more valuable, will be the saving in the cost of transportation. As lumber advances in price the economy of handling and transportation will be a matter requiring more consideration. Deals can be transported more cheaply than inch boards, for one reason because they can be handled with less labor. Another advantage in re-sawing would be that the necessity of keeping on hand larger stocks in order to have the necessary assortments would be reduced, as the dimensions needed could be cut from deals on hand. Re-sawing will produce smoother lumber, because thinner saws may be used and run at a greater speed. The change in the manner of cutting and distributing lumber may not be immediately at hand, but it will take not many years hence. It will, no doubt, come on gradually; but as the manufacture of lumber recedes from the means of cheap transportation by water and the railroads have to be depended on, the cutting of their lumber at the mills will gradually cease, except for near-by-points.—*Lumberman's Gazette.*

DIRECTIONS FOR THE USE OF BELTS.

The putting on of belts should be done by a person acquainted with the use of belting, and too much judgment cannot be exercised in this respect, as the wear of the belt depends considerably on the manner in which it is put on, therefore the following suggestions, if practiced, will be of much service to person, in this capacity. The butts to be joined together should be cut perfectly square with the belt, in order that one side of the band may not be drawn tighter than the other. For the joining of belts, good lace-leather, if properly used, being soft and pliable, will always give satisfaction. Where belts run vertically, they should always be drawn moderately tight, or the weight of the belt will not allow it to adhere closely to the lower pulley, but in all other cases they should be slack. In many instances the tearing out of lace holes is unjustly attributed to poor belting, when, in reality, the fault lies in having a belt too short, and trying to force it together by lacing, and the more leather has been stretched while being manufactured, the more liable it is to be complained of. All leather belting should occasionally be greased with the following mixture, or it may become dry and will not adhere to the pulleys: 1 gallon of neat's foot or tanner's oil, 1 gallon of tallow, 12 ounces of resin; dissolve by heating and mix well together. During the winter season an extra quantity of oil should be added to the mixture. To obtain the greatest amount of power from belts the pulleys should be covered with leather; this will allow the belts to be run very slack, and give 25 per cent. more wear. More power can be obtained from using the grain side of a belt to the pulley than from the flesh side, as the belt adheres more closely to the pulley; but there is this about it—the belt will not last half so long, for when the grain, which is very thin, is worn off, the substance of the belt is gone, and it then quickly gives out; so that I would advise the more saving plan of obtaining power by driving with wider belts, and covering the pulleys with leather. Where belts are run in very damp places, or exposed to the weather, I would recommend the use of rubber belting; but for ordinary use it will not give the satisfaction which is so generally obtained from using oak leather belting, as it cannot be run on cone pulleys through forks or at half cross, and with fair usage would be worn out, while a leather belt was regularly performing the work allotted to it; for when the edge becomes worn, the belt soon gives out.—*Van Riper.*

THE CROSS-CUT SAW.

Ten years' experience in the use of cross-cut saws has proved to me that I have been working under many disadvantages until recently. My wish is for all to know the great advantage of a plan which I pursue. Take a new saw that has never been set, place it between two boards cut to fit the saw, clamp it tight on a bench or vice; take an iron wedge, file one corner to suit the set of the tooth when finished, then take a small hammer, hold the wedges with the left hand, strike the tooth lightly with the hammer until at the right place; then turn the wedge on the opposite side, and on the next tooth and set in the same way; now then you reach the third and most important tooth in the saw; leave it perfectly straight; pass on to the fourth tooth and set as you did the first; turn the wedge, set the fifth the other way; leave the sixth straight, and so on till you finish. Now take your file, dress the two teeth as you do the common saw; the third file perfectly straight and square, leaving it about one-twentieth part of an inch shorter than the others. Continue in that way until you finish, and you will find that it will cut twice as fast as the old way practiced by most of the farmers.

BLACK WALNUT TREES.

Eli Perkins, the great American delusionist, has struct a bonanza for lumbermen in Texas. Sim Graves, a native, has shown Eli a grove of black walnut trees, hand planted ten years ago, that have attained the respectable proportions of nine inches diameter, and which, he assured him, would be nineteen inches through within twenty years from the date of planting. Sim and Eli then sat down and figured out the value of this grove, which contains ten acres. Each acre contains two hundred trees, or the whole patch two thousand. Sim says these trees will yield him four hundred bushels of nuts this year, which at $2.50 per bushel will give him $1,000, and as this yield will increase instead of decrease, he reckons his future income at no less than this sum per annum until the trees are twenty years of age. When that time arrives, Sim expects to sell his grove for $25 per tree or $50,000. Eli concludes his narrative by advising the public to buy land at $25 per acre and settle down as black walnut farmers.—*Lumber World.*

Usual Excellent Style.

Messrs. Toker & Co., Peterborough, Ont., have become proprietors of The Canada Lumberman, the first nine numbers of which were published in Toronto by Mr. Alexander Begg. The Lumeerman will be purely a trade organ, and is the only newspaper published in Canada devoted to the interests of the lumber and timber interests of the Dominion. It will contain trade statistics, the markets, articles bearing on the important interests it represents, and must prove itself a most excellent and trustworthy medium through which lumbermen, millers, miners, etc., may elucidate and set forth their ideas, either individually or collectively, for the benefit of the trade at large. It is a large semi-monthly 16-page newspaper, and is printed from fine clear type, and the workmanship is in Messrs. Toker & Co's usual excellent style. The subscription price is only $2 per annum.—*Printers' Miscellany, St. John, N.B.*

Do Not Drug the System with nauseous purgatives that only debilitate. Burdock Blood Bitters is nature's own Cathartic, it acts at once upon the Bowels, the Skin, the Liver and the Kidneys, arousing all the secretions to a healthy action. It purifies the Blood and cures all Humors, even the worst form of Scrofula, and tones up the Nervous and Debilitated.

ARTIFICIAL SEASONING OF LUMBER.

Van Nostrands *Engineering Magazine* says on this important subject: To prepare timber for the sounding bords of musical instruments, so that they are not influenced by vibrations in temperature and atmospheric changes generally, Mr. C. Rene, pianoforte manufacturer, of Stettin, Germany, has devised a plan by which he makes use of the property of oxygen, particularly of that ozonized by the electric current, to artificially season the timber. The first impulse to experiments being carried out in this direction was given by the well-known fact that wood, which has been seasoned for years, is much more suitable for the manufacture of musical instruments than if used soon after it is thoroughly dried only. Mr. Rene claims that instruments made of wood which has been treated by oxygen possesses a remarkably fine tone, which not only does not decrease with age, but as far as experience teaches improves with age as does the tone of some famous old violins by Italian masters. We are further told that the sounding boards made of wood prepared in this manner have the quality of retaining the sound longer and more powerfully. A number of pianos manufactured at Mr. Rene's works, and exported to the tropics several years ago, have stood exceedingly well, and seem in no way affected by the climatic dangers they are exposed to. While other methods of impregnating wood with chemicals generally have a deteriorating influence on the wood fibers, timber prepared by this method, which is really an artificial agency, becomes harder and stronger. The process is, we understand, regularly carried on at Mr. Rene's works, and the apparatus consists of a hermetically closed boiler or tank, in which the wood to be treated by the process is placed on iron gratings; in a retort, placed by the side of the boiler and connected to it by a pipe with stop valve. Provision is made in the boiler to ozonize the oxygen by means of an electric current, and the boiler is then gently fired and kept hot for forty-eight or fifty hours, after which time the process of preservation of wood is complete.

SUMMER DRINKS.

The London *Chemist and Druggist* gives the following receipts for these seasonable beverages:—

(1) *Ginger Beer.*

Brown sugar	2 lbs.
Boiling water	2 galls.
Cream of tartar	1 oz.
Ginger bruised	2 oz.

Infuse the ginger in the boiling water, add the sugar and cream of tartar; when lukewarm, strain, then add one half pint good yeast. Let it stand all night; then bottle. If desired, a lemon may be added, and it may be clarified by the white of one egg.

(2) *Lemon Beer.*

Sugar	1 pound.
Boiling water	1 gall.
Lemon, sliced	1.
Ginger, bruised	1 oz.
Yeast	1 teacupful.

Let it stand 12 to 20 hours, after which it may be bottled.

(3) *Hop Beer.*

Sugar	4 lbs.
Hops	6 oz.
Water	q. s.
Ginger, bruised	4 oz.

Boil the hops three hours with 5 quarts of water, then strain; add 5 more quarts of water and the ginger, boil a little longer, again strain, add the sugar, and when lukewarm add one pint of yeast. After 24 hours it will be ready for bottling.

(4) *Spruce Beer.*

Hops	2 oz.
Sassafras, in chips	2 oz.
Water	10 galls.

Boil half an hour, strain, and add:—

Brown sugar	7 lbs.
Essence of spruce	1 oz.
Essence of ginger	1 oz.
Pimento, ground	½ oz.

Put the whole in a cask, and let cool; then add one half pint of yeast, let stand 24 hours, fine and bottle it.

Basswood is scarce in Chicago just now, and dealers state that they can readily place all the seasoned they can get hold of without meeting the demand.

ST. JOHN, N.B.

From Our Own Correspondent.

GENERAL REMARKS.—As usual at this season of the year, we have very little for special remark in regard to the progress of our lumber trade. Under these circumstances a few observations with reference to the character of our wood trade generally may not be altogether out of place.

As will be seen by reference to our periodical report of shipments, Europe (and especially Great Britain) is the principal wood market of this port; indeed the same may be said of the Province generally; our wood exports thence consisting very largely of spruce deals.

The lumber trade between this port and the United States is not altogether Canadian. It is almost exclusively in the hands of people from the States, who procure their logs from that portion of the State of Maine watered by the River St. John and tributaries, float them to St. John, where the lumber is manufactured and shipped to the United States as American lumber, and, consequently, free of duty, thus possessing a decided advantage over Canadian lumber, tending to the exclusion of the latter from the American market. There are some ten saw mills in this city and vicinity engaged in this business. The lumber is mostly pine, cut into boards and plank from one to two inches in thickness.

Our shipments to the West Indies, consisting of pine boards chiefly, are comparatively small, and mostly in the winter season.

FREIGHTS.—The freight market is extremely dull and rates very low. For Liverpool the latest quotation is 52/6.

SHIPMENTS.—The shipments of deals and other sawn lumber are as follows:—

For Europe	12,667,000 Sup. ft.
" United States	2,875,000 "
" West Indies	180,000 "

VESSELS IN PORT.—The following is a list of square-rigged vessels in port with their tonnage and destination:—

Nettie Murphy, 1,373, Liverpool.
William, 998, waiting.
Douglas Campbell, 845, Marseilles.
Granite City, 776, United Kingdom.
Effort, 378, United Kingdom or Continent.
Africa, 1,130, Cardiff.
Wanderer, 438, Ireland.
Huano, 843, Belfast.
Blanco, 343,——
Josie Troop, 1,100, Gibraltar, orders.
Venus, 734, United Kingdom.
Cecilia, 334, Continent.
Nylghau, 1,254, Liverpool.
Liffey, 845, Liverpool.
Charles, 1,500, Liverpool.
L. H. D'Veber, 615, Londonderry.
John Murphy, 1,475, Liverpool.
Bonito, 599, Galway.
Broderine, 453, Marseilles,
Taganrog, 514, Marseilles.
Loining, 847, St. Nazaire.
E. W. Gale, 320, Drogheda.
Revolving Light, 1,317, Liverpool.
Rebus, 845, Marseilles.
Mark Twain, 674, Bristol Channel.
Moss Glen, 893,——
Varbjug, 401,——
Acton, S.S., 1,066, W.C. England.
New City, 1,441, Liverpool.
Finsbury, S.S., 1,229, W.C. England.
Astracana, 1,193, Liverpool.
Arklow, 748,——
Waciasa, 809,——
Zebina Goudy, 1,100, Liverpool.
Cid, S.S., 976, W.C. England.
Hawthorne, 621,——
Dusty Miller, 595, Carnarvon.
Fidelia, 450,——
Nellie Moody, 746,——
Endrick, 324,——
Navigator, 530,——
Wearmouth, S.S., 1,101, W.C. England.
Charles B. Kenney, 1,128, Adelaide, orders.
Stirlingshire, 549,——
Habor, 300,——
Jennie Parker, 998,——

St. John, N.B., July 2nd, 1881.

ZOPESA.—A healthy man never thinks of his stomach. The dyspeptic thinks of nothing else. Indigestion is a constant reminder. The wise man who finds himself suffering will spend a few cents for a bottle of *Zopesa*, from Brazil, the new and remarkable compound for cleansing and toning the system, for assisting the Digestive apparatus and the Liver to properly perform their duties in assimilating food. Get a 10 cent sample of *Zopesa*, the new remedy, of your druggist. A few doses will surprise you.

SALE BY TENDER
OF EXTENSIVE STEAM
Saw-Milling Property
AT
Parry Harbour, Georgian Bay, and Valuable Timber Limits in the Parry Sound District.

The SAW-MILL is complete in its appointment, and has a cutting capacity of 90,000 to 100,000 feet per day of twelve hours.

The LIMITS cover an area of 229 square miles in the Townships of Monteith, Humphrey, Christie, Ferguson, Hagerman, McKellar, Spence, and Shawanaga, besides the purchased rights to cut the timber from numerous lots in the same Townships, and contain a large quantity of standing pine.

The whole establishment is in complete condition and active operation, and is excellently situated for the manufacture, sale and shipment of timber.

Tenders for the whole property, including plant, will be received until the 20th August next, addressed to the General Manager, Ontario Bank, Toronto, by whom terms of payment and any further information will be furnished on application. No tender will be accepted unless satisfactory to the vendors. 4L17

IRWIN & BOYD
Commission Lumber Dealers,
FORWARDERS,
Shipping and General Agents
PORT HOPE.

Department of the Interior,

OTTAWA, 25th May, 1881.

WHEREAS circumstances has rendered it expedient to effect certain changes in the policy of the Government respecting the administration of Dominion lands, public notice is hereby given:—

1. The Regulations of the 14th October, 1879, were rescinded by order of His Excellency the Governor General in Council, on the 20th day of May instant, and the following Regulations for the disposal of agricultural lands substituted therefor:

2. The even-numbered sections within the Canadian Pacific Railway Belt—that is to say, lying within 24 miles on each side of the line of the said Railway, excepting those which may be required for wood-lots in connection with settlers on prairie lands within the said belt, or which may be otherwise specially dealt with by the Governor in Council, shall be held exclusively for homesteads and pre-emptions. The odd-numbered sections within the said belt are Canadian Pacific Railway Lands, and can only be acquired from the Company.

3. The pre-emptions entered within the said belt of 24 miles on each side of the Canadian Pacific Railway, up to and including the 31st day of December next, shall be disposed of at the rate of $2.50 per acre; fourtenths of the purchase money, with interest on the latter at the rate of six per cent. per annum, to be paid at the end of three years from the date of entry, the remainder to be paid in six equal instalments annually from and after the said date, with intercst at the rate above mentioned on such portions of the purchase money as may from time to time remain unpaid, to be paid with each instalment.

4. From and after the 31st day of December next, the price shall remain the same—that is $2.50 per acre—for pre-emptions within the said belt, or within the corresponding belt of any branch line of the said Railway, but shall be paid in one sum at the end of three years, or at such earlier period as the claimant may have acquired a title to his homestead quarter-section.

5. Dominion Lands, the property of the Government, within 24 miles of any projected line of railway recognized by the Minister of Railways, and of which he has given notice in the *Official Gazette* as being a projected line of Railway, shall be dealt with as to price and terms, as follows:—The pre-emptions shall be sold at the same price and on the same terms as fixed in the next preceding paragraph, and the odd-numbered sections shall be sold at $2.50 per acre, payable in cash.

6. In all townships open for sale and settlement within Manitoba or the North-West Territories, outside of the said Canadian Pacific Railway Belt, the even-numbered sections, except in the cases provided for in clause two of these Regulations, shall be held exclusively for homestead and pre-emption, and the odd-numbered sections for sale as public lands.

7. The lands described as public lands shall be sold at the uniform price of $2 per acre, cash, excepting in special cases where the Minister of the Interior, under the provisions of section 4 of the amendment to the Dominion Lands Act passed at the last session of Parliament, may deem it expedient to withdraw certain farming lands from ordinary sale and settlement, and put them up for sale at public auction to the highest bidder, in which event such lands shall be put up at upset price of $2 per acre.

8. Pre-emptions outside of the Canadian Pacific Railway Belt shall be sold at the uniform price of $2 per acre, to be paid in one sum at the end of three years from the date of entry, or at such earlier period as the claimant may acquire a title to his homestead quarter-section.

9. Exceptions shall be made to the provisions of clause 7, in so far as relates to lands in the Province of Manitoba or the North-West Territories, lying to the north of the belt containing the Pacific Railway lands, wherein a person being an actual settler on an odd-numbered section shall have the privilege of purchasing to the extent of 320 acres of such section, but no more, at the price of $1.25 per acre, cash; but no Patent shall be issued for such land until after three years of actual residence upon the same.

10. The price and terms of payment of odd-numbered sections and pre-emptions, above set forth, shall not apply to persons who have settled in any one of the several belts described in the said Regulations of the 14th October, 1879, hereby rescinded, but who have obtained entries for their lands, and who may establish a right to purchase such odd-numbered sections or pre-emptions, as the case may be, at the price and on the terms respectively fixed for the same by the said Regulations.

Timber for Settlers.

11. The system of wood lots in prairie townships shall be continued—that is to say, homestead settlers having no timber on their own lands, shall be permitted to purchase wood lots in area not exceeding 20 acres each, at a uniform rate of $5 per acre, to be paid in cash.

12. The provision in the next preceding paragraph shall apply also to settlers on prairie sections bought from the Canadian Pacific Railway Company, in cases where the only wood lands available have been laid out on even-numbered sections, provided the Railway Company agree to reciprocate where the only timber in the locality may be found on their lands.

13. With a view to encouraging settlement by cheapening the cost of building material, the Government reserves the right to grant licenses from time to time, under and in accordance with the provisions of the "Dominion Lands Act" to cut merchantable timber on any lands owned by it within surveyed townships; and settlement upon, or sale of any lands covered by such license, shall, for the time being, be subject to the operation of the same.

Sales of lands to Individuals or Corporations for Colonization.

14. In any case where a company or individual applys for lands to colonize, and is willing to expend capital to contribute towards the construction of facilities for communication between such lands and existing settlements, and the Government is satisfied of the good faith and ability of such company or individual to carry out such undertaking, the odd-numbered sections in the case of lands outside of the Canadian Pacific Railway Belt, or of the Belt of any branch line or lines of the same, may be sold to such company or individual at half price, or $1 per acre, in cash. In case the lands applied for be situated within the Canadian Pacific Railway Belt, the same principle shall apply so far as one half of each even-numbered section is concerned—that is to say, the one-half of each even-numbered section may be sold to the company or individual at the price of $1.25 per acre to be paid in cash. The company or individual will further be protected up to the extent of $500, with six per cent. interest thereon till paid, in the case of advances made to place families on homesteads, under the provisions of section 10 of the amendments to the Dominion Lands Acts hereinbefore mentioned.

15. In every such transaction, it shall be absolutely conditional:—

(*a.*) That the company or individual, as the case may be, shall, in case of lands outside of the said Canadian Pacific Railway Belt, within three years of the date of the agreement with the Government, place two settlers on each of the odd-numbered sections, and also two on homesteads on each of the even-numbered sections embraced in the scheme of colonization.

(*b.*) That should the land applied for be situated within the Canadian Pacific Railway Belt, the company or individual shall, within three years of the date of the agreement with the Government, place two settlers on the half of each even numbered section purchased under the provision contained in paragraph 14, above, and also one settler upon each of the two quarter sections remaining available for Homesteads in such section.

(*c*) That on the promoters failing within the period fixed, to place the prescribed number of settlers, the Governor in Council may cancel the sale and the privilege of colonization, and resume possession of the lands not settled, or charge the full price of $2 per acre, or $2.50 per acre, as the case may be, for such lands, as may be deemed expedient.

(*d.*) That it be distinctly understood that this policy shall not only apply to schemes for colonization of the public lands by Emigrants from Great Britain or the European Continent.

Pasturage Lands.

16. The policy set forth as follows shall govern applications for lands for grazing purposes, and previous to entertaining any application, the Minister of the Interior shall satisfy himself of the good faith and ability of the applicant to carry out the undertaking involved in such application.

17. From time to time, as may be deemed expedient, leases of such Townships, or portions of Townships, as may be available for grazing purposes, shall be put up at auction at an upset price to be fixed by the Minister of the Interior, and sold to the highest bidder—the premium for such leases to be paid in cash at the time of the sale.

18. Such leases shall be for a period of twenty-one years, and in accordance otherwise with the provisions of section eight of the Amendment to the Dominion Lands Act passed at the last Session of Parliament, hereinbefore mentioned.

19. In all cases the area included in a lease shall be in proportion to the quantity of the live stock kept thereon, at the rate of ten acres of land to one head of stock; and the failure in any case of the lessee to place the requisite stock upon the land within three years from the granting of the lease, or in subsequently maintaining the proper ratio of stock to the area of the leasehold, shall justify the Governor in Council in cancelling such lease, or in diminishing proportionately the area contained therein.

20. On placing the required proportion of stock within the limits of the leasehold, the lessee shall have the privilege of purchasing, and receiving a patent for, a quantity of land covered by such lesse, on which to construct the buildings necessary in connection therewith, not to exceed five per cent. of the area of the leasehold, which latter shall in no single case exceed 100,000 acres.

21. The rental for a leasehold shall in all cases be at the rate of $10 per annum for each thousand acres included therein, and the price of the land which may be purchased for the cattle station referred to in the next preceding paragraph, shall be $1.25 per acre, payable in cash.

Payments for Lands.

22. Payments for public lands and also for pre-emptions made in cash, or in scrip, or in police or military bounty warrants, at the option of the purchaser.

23. The above provisions shall not apply to lands valuable for town plots, or to coal or other mineral lands, or to stone or marble quarries, or to lands having water power thereon; and further shall not, of course, affect Sections 11 and 29 in each Township, which are public school lands, or sections 8 and 26, which are Hudson's Bay Company's lands.

J. S. DENNIS,
Deputy Minister of the Interior.

LINDSAY RUSSELL,
Surveyor-General. 3L17

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TRUSSES.

CLUTHE'S PATENT SPIRAL TRUSS all attachments improved. No more buckles, all on solid brass casting. Book on rupture and human frame free. Send address in full post card. Best true information about rupture and deformities. CHAS. CLUTHE, Surgical Machinist, 118½ King Street west, Toronto. 12L13

Market Reports.

TORONTO.

From Our Own Correspondent.

TORONTO, July 9, 1881.—There is not much that is new in lumber matters to record since my last letter, only that the demand for cars has become more vociferous, and much of the language hurled at the heads of N.R.R. officials will hardly bear repeating, and in the present instance there actually seems to be just cause for complaint, as the long interval that has elapsed since the change of gauge from Allandale to the Northern extremity of the line should have been ample time in which to have completed the change south of the former place, and the delay at this period of the season has, no doubt, seriously inconvenienced shippers, as most of the manufacturers are anxious to get their lumber to market, and a few weeks delay may mean an advance in freights to Oswego and Albany, and it is claimed by some persons that a considerable quantity of lumber might have beeen brought over the Credit Valley line, and the owners of stocks thus delayed would sooner have paid something extra, in order to have got their stuff to market. It seems to me that the great mistake made by the company has been in delaying the work until the busy season set in. In the meantime, large quantities of lumber has been accumulating at different points of the road, and next week we expect a rush of lumber down that will gladden the hearts of the lumbermen.

The strange anomaly in regard to the purchasing and selling price of shingles as mentioned in my last letter, still continues; some dealers here selling XXX 16-in, shingles as low as $2.40 per M., which is fully as low as most of the manufacturers are willing to place them in this market for. One dealer to whom I pointed out the foolishness of such a proceeding, argued much in the same style as the old woman, who declared that she sold apples for less than cost, and in answer to the query as to how she managed to make a living under such circumstances, she declared it was owing to the large quantity she sold..

I would here intimate to any of your readers who may have cherry lumber for sale, that good prices may now be obtained in this market, especially if well manufactured. As high as $30.00 per M. by the car load has been paid for good cherry lumber, but it is useless for manufacturers to expect good prices for an inferior article. The great fault with many manufacturers is in leaving the heart in heavy plank and squares, so that before it gets to market it is so split up in consequence as to materially hinder its sale. A word to the wise will be sufficient. Take a piece of 4x4 out of the heart of the log and throw it away, if you have no better use for it, and the enhanced price you will obtain for the lumber you market, will fully repay the trouble taken. The same remark will apply to all hardwoods. There is another class of wood that commands ready sale, namely, black birch, and it should be cut into 5x5, 6x6, 8x8 and 10x 10. A large quantity of this class of lumber is now used for newel posts, cherry having become so scarce.

Stock boards of good quality for dressing purposes will now sell readily, both for local use and for shipment, but dry lumber sufficiently good for dressing purposes is scarcely obtainable at any price, and the inevitable result will be that the retail business will gradually drift into the hands of men who are possessed of sufficient capital to carry large stocks, so as to be able at all times to meet the constantly increasing demand for thoroughly dry lumber; that this will be the case becomes more apparent year after year, as mill men decline to hold their lumber any longer than is absolutely requisite to make it in a fit condition for shipment, so that it naturally follows out that the retailer will be bound to meet the demand for dry stuff.

Another inovation to be noted this season is the large quantity of 1-in. flooring being used instead of 1¼-in. as formerly, so that those holding large stocks of 1¼-in. flooring plank, find it difficult to market any considerable quantity. This should be noted by manufacturers for their future guidance, and if instead of cutting so much 1¼-in. flooring plank in the future, they would cut the same class of logs into 3-in. plank (especially 16-ft. lengths) it will command ready sale and at more remunerative prices, if held until partially dry. Sawn lath in this market are tending downwards in price, and are easily obtained at the yards at $1.40 to $1.50 per M. There is quite a large trade being done in walnut in this market at the present time. The largest dealers in this class of wood here are Messrs. Oliver & Co., who have especial facilities for handling and storing large quantities of this class of lumber, and the greatly increased value of this kind of wood would indicate that at no distant date other and less expensive woods will take its place. In a future letter I will endeavor to give you the quantity of walnut sold in this market, and I venture to predict it will surprise many of your readers.

Prices at the yards rule as follows:—

Mill cull boards and scantling	$ 9 00
Shipping cull boards, promiscous widths	11 00
" " 10 and 12 in. stocks	12 00
Scantling and joist, up to 16 ft	$11 50
" " " 18 ft	12 00
" " " 20 ft	12 50
" " " 22 ft	13 00
" " " 24 ft	13 50
" " " 26 ft	14 50
" " " 28 ft	15 50
" " " 30 ft	17 00
" " " 32 ft	18 00
" " " 34 ft	20 00
" " " 36 ft	22 00
" " " 38 ft	25 00
" " " 40 to 44 ft	30 00
Cutting up plank and boards	16 00
Sound dressing stocks	15 00
Picks Am. inspection	24 00
Three uppers, Am. inspection	32 00
1¼-inch dressed flooring	28 00
1¼ " "	24 00
1 " "	20 00
XXX sawn shingles, ₱ M	2 50
Lath	1 55

OTTAWA.

From Our Own Correspondent.

The lumber trade this season is very encouraging. Sales have been good so far at prices somewhat in advance of those of last year. The output of logs this spring, on the Upper Ottawa, reached nearly two million, while three times as much square timber was taken out as in the winter of 1879-80. It is estimated that the cut of lumber by the mills in this immediate section the current year will reach 300,000,000 feet. Not more than one-half of the season's cut of lumber has been sold so far. The quotations at the present time are as follows:—

12-in. stock, ₱ M	$16 00@16 00
10-in. "	12 00@14 00
Sidings	20 00@20 00

These prices are about a dollar per thousand in advance of the prices of last year at the same period. Deals are dull sale, in fact very few lots have been sold since the winter. Two-thirds quality rate at from $30 to $33 per 100 standards on the Quebec basis. Second and first quality of deals rate in proportion to the quotation given.

THE DRIVE.

The Upper Ottawa drive is coming down first-rate, although about two weeks later than last year. Navigation opened early but there was a lack of rain at the time that the snow in the woods melted away. Notwithstanding this, the quantity of logs stuck in the small streams is not great, there not being so many as was at one time expected.

FREIGHT BUSINESS.

Business in the freight line is rather dull this season in comparison to last. This is owing to the fact that there are more boats engaged in carrying lumber. Last year a good many barges were engaged in carrying ice to New York, owing to the ice "famine" that existed there, besides which there has been quite an increase in the number of barges. The present rates are as follows: To Montreal, $1.10 to $1.25 per M.; to Quebec and Burlington, $2; to Whitehall, $2.25; to Albany, $3; and New York. $3.25. This is a decrease of fifty cents per thousand to Albany and New York. The rates to Whitehall, Quebec and Burlington are the same as last season, with a slight decrease in rate to Montreal.

OTTAWA'S FLEET.

The total number of vessels registered at the port of Ottawa is 122—42 being steam vessels and 80 being barges. The tonnage of the steamboats amounts to 4,208, and that of the barges to 9,366, making a total tonnage for the port of 12,774. The number of men and boys employed in working the fleet is, in round figures, 650, and the expenses foot up to about $100,000 or more for the season. About one-half of the vessels using steam are steam barges, and capable of carrying good loads as well as towing. Nearly all of the barges are engaged in the transport of lumber, often bringing return cargoes of merchandise from Montreal. The principal owners of vessels are Mr. J. R. Booth, Perley & Pattee, D. Murphy & Co., McNaughton & Co., Capt. Blanchard, Capt. S. Mulligan, Ald. Harris, and the Augur Shipping Co.

SQUARE TIMBER.

The quantity of square timber taken out on the Ottawa this season is about treble that of last year, but as the water is now falling fast it may be late in the season before it all gets through, and it is quite probable that some of it may have to be wintered over at points along the route, so a lumberman informs me. This season an innovation was made in the transport of square timber, Mr. Findlay and Mr. Mackie both shipping large quantities by rail, through from the Mattawa to Quebec, by the Canada Central and Occidental Railways. It saves time, and as the expense is very little greater it is altogether probable that the day is not far distant when the most of the timber cut on the Upper Ottawa will be sent to Quebec by rail instead of by water.

EDGINGS.

Mr. E. B. Eddy employs 150 men at the Nepear steam sawmill, which is located at the head of the Duchesne Rapids, on the Ontario side of the Ottawa. The mill is run night and day.

Conroy Bros. have put on a night gang at their mill, Duchesne Rapids, Quebec side, and are manufacturing a large quantity of lumber this season. The Occidental Railway Co. will run a branch of their line into the mill premises to facilitate shipment. The branch will be three-quarters of a mile in length.

The new saw mill of Lachlin Bros., Arnprior, is being finished and is said to be one of the finest on the continent. The building is a splendid one, being solidly and neatly built, while the machinery put in is of the very best.

It is probable that all the mills at the Chaudiere will shortly be lighted by electricity. Capt. Young has followed in the wake of Mr. E. B. Eddy, adopting the electric light, and the other mill men feel inclined to follow suit. The lights at Mr. Young's mill are on the Maxam system, furnished by the Canadian Electric Light Co., of Montreal.

The splint factory at Horseshoe Bay, twenty miles down the river from Ottawa, is running full blast. It is owned by the American firm of Swift, Courtney & Beecher, who have four large match factories in operation in the States, and is managed by Edward Prince. Nine barges of splints were shipped to the other side last season, and this year five barge loads have already been started, and Mr. Prince hopes to get seven or eight more barges away by the close of navigation.

Mr. Hebron Harris took out a large quantity of ties on the Gatineau the past season, and is now shipping them to Cape Vincent, having a contract with an american railway company.

LONDON, ONT.

From Our Own Correspondent.

JULY 11.—To begin this, my initial letter, with "nothing new," would not be likely to awaken any desire on the part of my readers to continue its perusal beyond the first few lines. To make manifest a letter of interest, it is as well to do it at the beginning, particularly if your correspondent is wishful to become popularly read by those most interested.

I must inform you then, at the outset, that in this market lumber of all grades is in very great demand, and a gradual advancing tendency is very apparent.

I am informed on very good authority that more lumber has come into this market for the present year than any year previous, and putting this fact, and the probability of higher figures, together, it would suggest something of what is now-a-days known as a "boom."

Several very large building contracts are now in process, and nearing completion.

The Roman Catholic Cathedral here, which is to cost in the neighbourhood of $90,000, is now some feet above ground level, and the masons are busy ten hours a day. The lumber contract for this building is possibly about $10,000, and is in the hands of a well known firm of this city.

The Masonic Temple, which will be opened about September, is beginning to present a fine appearance. The same firm which has the Roman Catholic Cathedral contract, has this also, which will not be far short of $10,000 in amount.

The contract for the Exhibition Grounds supply (for the Provincial Exhibition which is to be held here this year) is partly let, to the amount of about $6,000, with more to follow, and is in the hands of a well known lumber merchant here. A fine mansion is being built by Mr. Benj. Cronin. The contract for woodwork for which alone is $12,000.

The cedar block pavement which has just been completed on Dundas street from Ridout to Richmond, is a fine piece of work, and the contractors, Messrs. Stevens, Turner and Burns, have shown a wonderful mark of advancement in their increased facilities. They have had about fifty car loads of cedar posts from all over the country, principally, however, from places on the London, Huron & Bruce and Wellington, Grey and Bruce Railroads.

A very fine mansion is being built on Dufferin Avenue for Mr. McDonough, the contract for which is about $8,000 for woodwork.

The same complaint prevails here with regard to want of cars; an insufficient quantity for the demand is very apparent.

Shingles are very scarce, only two carloads have come into the city within the past four weeks, and one firm alone have told me they could have sold 30 carloads if they had had them.

Below I give you a list of London prices, which, however, must be understood as retail figures:—

Mill cut boards and scantling	$ 8 00
Shipping cull boards, promiscous widths	10 00
" " 10 and 12 in. stocks	10 50
Common boards, promiscous widths	13 00
Scantling and joist, up to 16 ft	14 00
" " " 18 ft	14 50
" " " 20 ft	15 50
" " " 22 ft	16 50
" " " 24 ft	18 00
Common stock	14 00
Common 2 in. plank	13 00
Cutting up plank and boards	18 00
Sound dressing stocks	17 00
Clear and picks	28 00
Three uppers, Am. inspection	35 00
½ inch dressed and matched flooring	20 00
1 " " " "	20 00
" " " "	20 00
Lath	1 55
XXX sawn shingles, ₱ M	2 75
Lath per 1000 feet	4 25

NEW YORK.

The *Real Estate Record* of July 9th says: All reports upon the wholesale market continue in the cheerful, hopeful strain so frequently recorded this season. Demand has shown some irregularity, and from a few sources was a little disappointing, but the evidences seem to show that the movements of buyers are checked by exceptional and temporary influences with every prospect of removal at an early date. On all leading descriptions values, too, are well maintained, and while it is not uncommon to find some reduction in cost at this season of the year, sellers are confident that if any shrinkage at all becomes necessary it will be much smaller than usual. Yard assortments are light and dealers are ready to handle anything likely to improve their stocks. The first six months of the year show a good full export movement, and there is hopes of keeping up the same average to the first of January next.

The following is a comparative statement of exports of lumber from this port for the first six months of the years named:

	1878. feet.	1879. feet.	1880. feet.	1881. feet.
W. Indies	11,606,513	12,706,138	14,521,399	22,325,427
S. America	5,527,498	11,518,237	9,659,177	13,583,747
E. Indies, etc	3,245,252	3,415,768	4,008,455	3,248,336
Europe	5,799,098	5,202,794	6,746,868	2,820,362
Total	26,178,286	33,824,867	34,935,899	41,977,832

The above table does not include the exports of hardwoods. The exports of the month of June will rank among the largest for any corresponding period and are one and one-half million feet less than for April last.

Spruce of attractive quality is scarce on the spot and not easy to engage for future, as most

of the mills are under contract for the product of all the suitable logs they are in any way likely to secure. Full rates are in consequence asked and the bids range well up, also, as buyers are in some cases quite anxious. On ordinary sizes the tone has been quite steady also. Some pretty heavy arrivals were of late reported, but the bulk appears to have been engaged. May be quoted at $14.00@16.00 on randoms; and $16.00@18.00 for specials.

White pine continues firm in price and has a good sale on all regular outlets. Large amounts have gone abroad this season, but dealers who make the foreign trade a specialty, seem confident that shippers may still be depended upon as good customers. Full home wants are assured and generally the market is in excellent shape. We quote $17.00@19.00 per M. for West India shipping boards; $24.50@26.00 for South American do.; $16.00@16.50 for box board; $17.00@17.50 for do. wide and sound do.

Yellow pine has a first-rate market still, and on all grades showing merit there is a firm tone at full prices. The local consumption is becoming larger, and, in some cases, has run ahead of deliveries, compelling contractors to seek supplies from yards while awaiting the arrival of detained cargoes. Quite a number of shipping orders are in hand, but negotiations on these prove a trifle slow. We quote random cargoes at about $24.00@26.00 per M.; ordered cargoes, $26.00@28.00 do.; green flooring boards, $24.50@26.50 do.; and dry do. do., $27.00@29.00. Cargoes at the South, $15.00@19.00 per M. for rough, and $20.00@24.00 for dressed.

Hardwoods do not accumulate. Supplies come to hand to some extent, but quickly disappear, and buyers find it quite as difficult as ever to hunt up an attractive assortment. Prices naturally are quite firm all around. We quote at wholesale rates by carload about as follows: Walnut, $77@85 per M.; ash, $35@38 do.; oak, $40@45 do.; maple, $30@35 do.; chestnut, 1st and 2nd, $30@35; do. do. culls, $18@20 do.; cherry, $50@55 do.; white wood, ½ and ⅝ inch, $25@27.50, and do. inch, $33@35 do.; hickory, $35@45 do., for Western, and $65@75 for good nearby stock.

Shingles show no great variation. Demand is fair, the supply under very good control, and holders generally quite firm in asking former rates. Machine dressed cedar shingles quoted as follows: For 30-inch, $16@22.25 for A and $28.75@33.25 for No. 1; for 24-inch, $6.50@16 for A and $16.75@23 for No. 1; for 20-inch, $5@10.50 for A and $11.25@11.75 for No. 1.

OSWEGO, N.Y.

From Our Own Correspondent.

OSWEGO, N.Y., July 9, 1881.—There has been no particular change in this market since our last, the receipts have been about as usual at this season of the year, always being somewhat effected by Dominion and Fourth of July holidays. The quantity received for shipment has not been as large as during the early part of June, more being held for distribution here. The yards are well stocked, though a good deal of it is of this year's cut, and must be held a while before it can be disposed of. No change in lake freights. There has been a decline in canal rates of ten cents. Current rates are: $1.50 to Albany, and $2.20 to New York.

Receipts to date from opening of navigation:

1880	68 millions.
1881	59 "

Quotations are as follows:—

Three uppers	$42 00@45 00
Packings	32 00@35 00
Fine, common and dressing	20 00@25 00
Common	14 00@16 00
Culls	11 00@13 00
Mill run lots	17 00@22 00
Sidings, selected, 1, 1¼ inch	30 00@37 00
Mill run, 1x10, 12 in	16 00@21 00
Selected " "	20 00@25 00
Strips, 1 and 1¼ inch mill run	14 00@18 00
" " culls	10 00@13 00
1x6 selected for clapboards	25 00@35 00
Shingles, XXX, 18 inch, pine	3 75@ 0 00
XX, " "	2 75@ 0 00
XXX, 18 inch, cedar	3 00@ 3 00
XX, " "	2 25@ 2 25
Lath	1 40@ 1 40

"WHERE HAVE YOU BEEN FOR A WEEK BACK?" enquired a man of his neighbor; "I have not a weak back," retorted he, "you misunderstand me," remarked his friend; "but if you ever get a weak back try Burdock Blood Bitters." It cures all debility arising from disordered Kidneys, Liver or Blood, and is the best purifying tonic in the world. All medicine dealers supply Sample Bottles at 10 Cents; Regular Size $1.

ALBANY.

This is "Fourth of July" week when the district expects a quiet market. It has not been disappointed, for no large buyers have shown themselves since our last report. The receipts of lumber are free, the week which ended with 30th June bringing forward the largest quantity of any week this season; still we are much short of what we had received to date a year ago. Prices are without change and steadily held.

Hardwoods are in steady demand and unchanged in price.

Coarse lumber comes forward slowly; the mills are not running to their capacity for want of a sufficient supply of water; the demand is good and prices steadily held.

The receipts of lumber by lake at Buffalo for the week ending July 4th were 8,450,000 feet and by rail—— cars. The receipts by lake at Oswego for the week were 4,537,000.

The receipts by canal at Albany from the opening of navigation to July 1st were:

	Boards and Scantling, ft.	*Shingles, M.*	*Timber, cub. ft.*	*Staves, lb.*
1881	100,874,000	48	.....	459,000
1880	115,060,600	200	5,400	.....

Freights from Oswego to Albany, $1.60@1.65. From Ottawa to Albany, by boats, $3.00@3.50 ₱ M. feet.—*Argus.*

River freights are:—

To New York, ₱ M ft	@1 00
To Bridgeport	@1 37½
To New Haven	@1 37½
To Providence, Fall River and Newport	2 00@2 25
To Pawtucket	2 25@2 50
To Norwalk	1 25@1 30
To Hartford	@2 00
To Norwich	@2 00
To Middletown	@1 75
To New London	@1 75
To Philadelphia	@2 00

Quotations at the yards are as follows:—

Pine, clear, ₱ M	$50 00@60 00
Pine, fourths	45 00@55 00
Pine, selects	40 00@50 00
Pine, good box	14 00@28 00
Pine, 10-in. plank, each	00 38@00 42
Pine, 10-in. plank, culls, each	00 20@00 22
Pine boards, 10-in	25 00@27 00
Pine, 10-in. boards, culls	17 00@18 00
Pine, 10-in. boards, 16 ft., ₱ M	25 00@30 00
Pine, 12-in. boards, 16 ft	25 00@30 00
Pine, 12-in. boards, 13 ft	26 00@28 00
Pine, 1¼ in. siding, select	38 00@40 00
Pine, 1¼-in. siding, common	15 00@18 00
Pine, 1-in. siding, select	38 00@40 00
Pine, inch siding, common	15 00@18 00
Spruce, boards, each	00 15@00 15
Spruce, plonk, 1¼-in., each	00 19@00 19
Spruce, plank, 2-in., each	00 28@00 28
Spruce, wall strips, each	00 11@00 12
Hemlock, boards, each	00 13@00 00
Hemlock, joist, 4x6, each	00 31@00 31
Hemlock, joist, 2½x4, each	00 13@00 13
Hemlock, wall strips, 2x4, each	00 10@00 10
Ash, good, ₱ M	38 00@45 00
Ash, second quality, ₱ M	25 00@30 00
Cherry, good, ₱ M	60 00@70 00
Cherry, common, ₱ M	25 00@35 00
Oak, good, ₱ M	38 00@43 00
Oak, second quality, ₱ M	20 00@25 00
Basswood, ₱ M	25 00@28 00
Hickory, ₱ M	36 00@40 00
Maple, Canada, ₱ M	26 00@30 00
Chestnut, ₱ M	35 00@40 00
Shingles, shaved, pine, ₱ M	6 00@00 00
" 2nd quality	4 50@00 00
" extra, sawed, pine	4 20@04 25
" clear, "	3 25@00 00
" cedar, mixed	3 00@00 00
" cedar, XXX	3 75@00 00
" hemlock	2 25@00 00
Lath, hemlock, ₱ M	1 50@00 00
Lath, spruce, "	1 75@00 00
Lath, pine, "	2 00@00 00

SAGINAW VALLEY.

The *Lumberman's Gazette* says: Another week of great activity in the lumber market has passed, in which a large quantity of stock has changed hands at good figures. Prices for choice lumber are very firm, sales having been made at $8, $16 and $38, and $8, $16 and $40, and in one instance a manufacturer named $10, $20 and $40, as his figures for an extra choice lot. Among other sales we note 1,300,000 feet strips at $6.50, $13 and $30, 300,000 feet strips at $6.50 and $13, 200,000 feet strips at $9, 100,000 feet common strips at $6.50, $13 and $30, 1,500,000 at $7, $14 and $35, and 5,500,000 feet on market rates. There have been more lumber buyers in the market the past week than usual, the reduction in the cost of transportation seeming to have a favorable effect on the market.

Shingles are in good request at $1.90@2.10 for clear butts and $2.90@3.10 for XXX.

The total shipment of lumber, lath and shingles from the river for the season to date, were as follows:

Lumber, ft	228,033,503
Shingles	43,748,600
Lath	5,376,000
Hoops	7,519,000

The aggregate of lumber shipped last year to July 1, was 273,408,000 feet, and 1879, 195,714,811 feet. The shipments are fifty millions short of what they were last year at this date. The shingle shipments are about the same as last year, but only about one-half what they were in 1879.

MINNEAPOLIS.

The Mississippi Valley *Lumberman* of the 8th inst., says: The condition of the lumber business is all that any one anticipated could be at the opening of the season. There has been a steady advancement in values since the first day of January and the tendency is to still better figures. It is not an over estimate to say that emigration into the Missouri Valley and the country beyond (including Dakota) during the next two years will absorb five hundred million feet of lumber, which amount is to be added to that required in the west herefore, to say nothing of the emigration into the Mississippi Valley. The Lake Michigan region will necessarily have to furnish a portion of the amount required, because there is is not lumber enough cut on the waters of the Mississippi river to supply the country west of it. The advance in lumber during the past ten days at the several points along the river from St. Louis to Minneapolis has amounted to about one dollar per thousand on the leading qualities.

BOSTON.

There is still a very good distribution, although in some instances the intervention of a holiday has affected trade slightly, but the falling off is counter-balanced by the light receipts of the week. Prices remain very firm. Dimension stuff and long timber are very scarce, and in some cases are held rather above the general market, and from present indications will probably so continue. As a general rule the better kinds of lumber are stiff, and sales have been made at an advance over list prices. Ash is in pretty good supply and prices are not so firm, although dealers anticipate a speedy reaction as soon as this surplus stock is worked off. The following are car load quotations:

CANADA PINE.

Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
do do 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

TONAWANDA.

The *Northwestern Lumberman*, under date of July 5th, says: The market here has had a tendency to dullness the past week, owing to public excitement in regard to the President's assassination, public holiday, etc., all of which have somewhat broken in on the general activity and routine. Prices have suffered no change. Lake freights are quoted to-day at $2.25 from Bay City, and dealers and shippers are confidently looking forward to that figure as the settled price for the season.

CARGO LOTS—MICHIGAN INSPECTION.

Three uppers	$38 00@43 00
Common	17 50@20 00
Culls	11 50@12 50

The Grease Tree.

IT is said that large forests of the grease tree of China are to be found there, and they form the source of a considerable local traffic. This tree not very long ago was imported into India, and it is said that the experiment of cultivating it there has proved quite successful. In the Punjaub and northwestern provinces generally it grows as rapidly and as vigorously as in the native soil, and there are already thousands of trees on the government plantations yielding tons of seeds, admirably adapted to a variety of commercial purposes. Dr. Jameson, a chemist in the Punjaub, has prepared a quantity of grease from this tree, and has forwarded on trial a portion of it to the Punjaub railway to have its qualities tested in a practical manner as lubricating matter for those parts of the machinery constantly exposed to friction. The grease thus obtained forms an excellent tallow, burning with a clear, brilliant and, what is infinitely more to the purpose, a white light, and at the same time emitting not a trace of any unpleasant odor or of the ordinary disagreeable accompaniments of combustion.

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Walkerville, Ont., June 1881. 12L16

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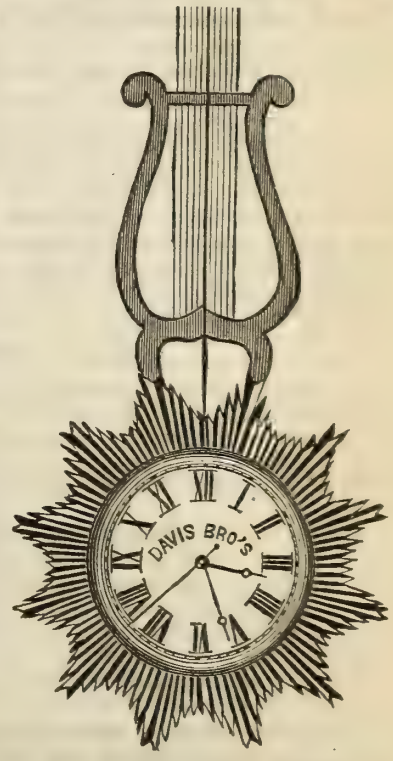

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CIRCULAR SAW STEAM FEED!

I would also call special attention to my

Heavy Circular Saw Mills

and for STEAM MILLS, would recommend the Steam Feed, having put in several which are giving the best of satisfaction, as will be seen by the following testimonials:—

GRAVENHURST, August 20th, 1880.

WM. HAMILTON, ESQ., Peterborough.

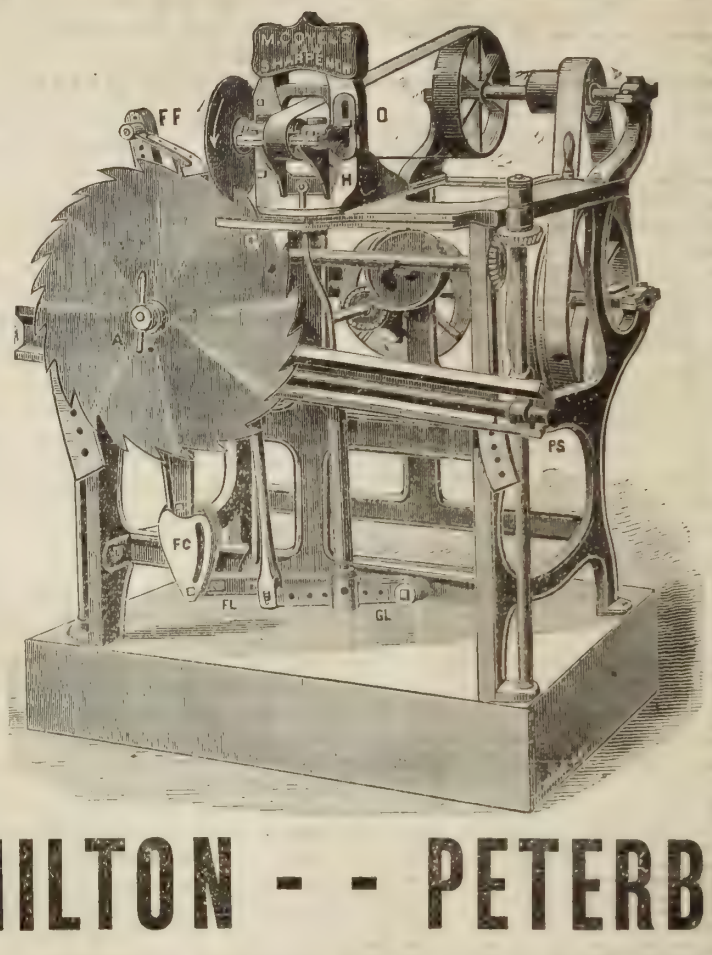
DEAR SIR—I have used your Steam Feed for near four months, and it has given me perfect satisfaction in every way; it is admitted by every person who has seen it work to be the best feed ever invented. Since I put it into my mill, I have not lost ten minutes time fixing anything belonging to it. I can cut 18 boards 13 ft. long in one minute. It can do much smoother and better work than the pinion feed. It is easily governed and reverses the carriages instantly. I am thoroughly satisfied with it and can recommend it to any person who has a Circular Saw Mill for cutting long or short logs. I consider I have cut more lumber than will pay for the Steam Feed since I got it than I would have cut had I not put it in.

Yours respectfully,
WILLIAM TAIT,
Lumberman, Gravenhurst.

TORONTO, August 11th, 1880.

WM. HAMILTON, Peterborough, Ont.

DEAR SIR—The Steam Feed you put in is working splendidly. Yours, &c.,
THOMPSON, SMITH & SON.



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I am also manufacturing Saw Mill Machinery, for all sizes of Gang or Circular Mills, Span or Double Circular for Slabbing Small Logs. My Patent Jack Chain for drawing logs into Saw Mills, acknowledged by all to be the Cheapest and best ever got up; also, my Patent Lumber Markers, different sizes of Edgers, Gang Lath Mills, Trimmers, Power Gunmers, and all Machinery used in a first-class Gang or Circular Saw Mill; also, small Hand Gunmers for use in the woods, for Cross-cut Saws. Rotary Pumps of different sizes, for Fire Protection in Mills, &c.

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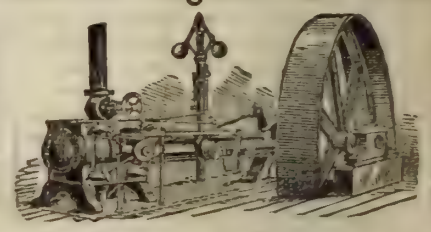

Where economy of fuel is the great consideration, along with uniformity of speed, such as is required in Grist and Flouring Mills, Woollen and Cotton Factories, or large Factories of any kind, I supply the Corliss Engine. I feel justified in saying that our Style, Workmanship and Finish on this Engine will be no discredit to its renown, and certainly is not equalled in this country for economy of fuel. I have them working at 2½ pounds of coal per horse-power per hour. L10

WILLIAM HAMILTON - - PETERBOROUGH, ONT.

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We watch the interest of our Customers. Our stock is FULL of the very best goods in Scotch, English and Canadian Tweeds.

We BUY and SELL for Cash, therefore it enables us to do business on very SMALL PROFITS.

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We give a Good Overalls for 0 35

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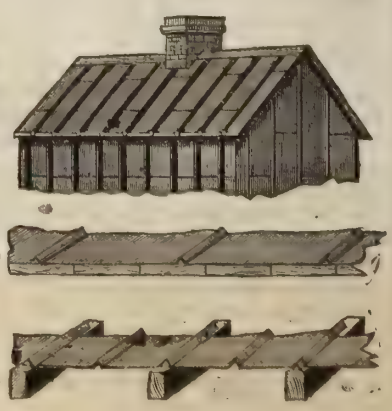

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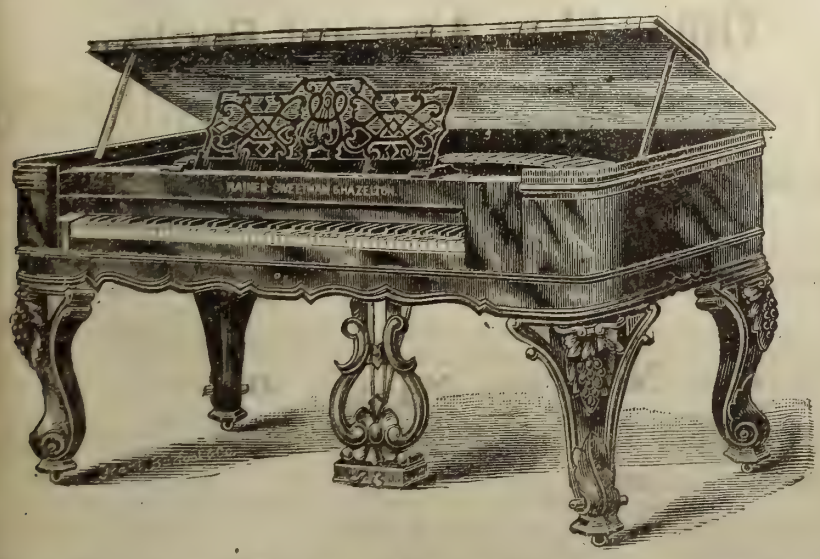

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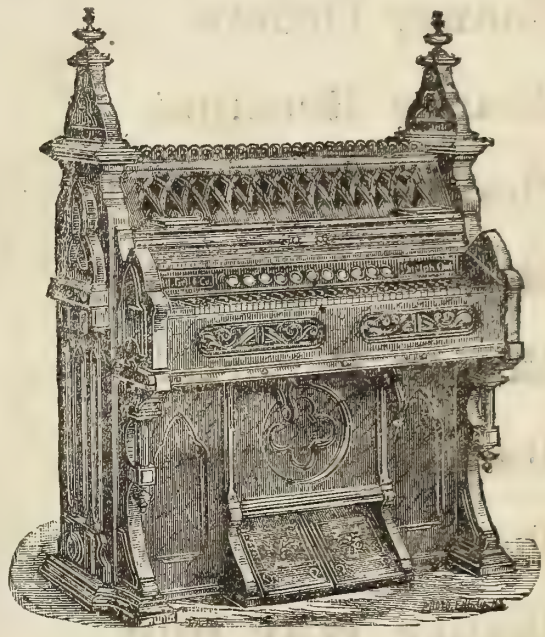

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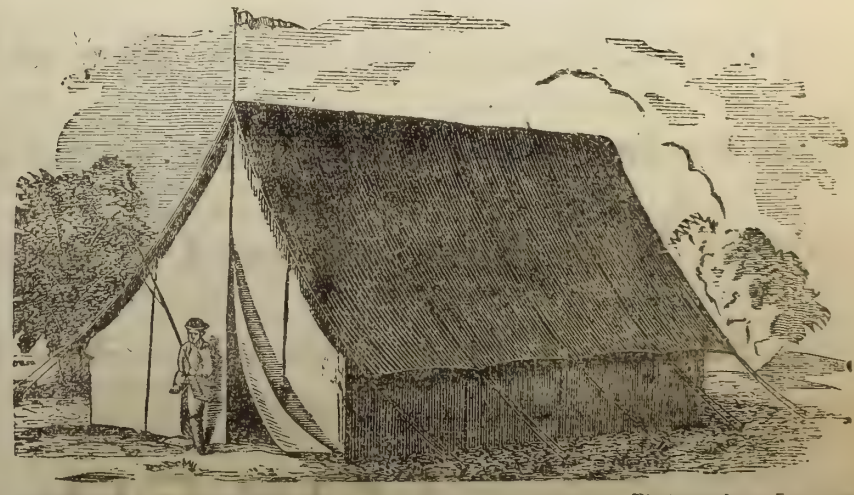

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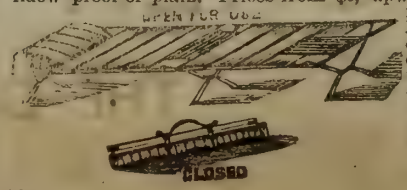

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EMERY WHEELS FOR SAW GUMMING!

Solid Emery Wheels are now almost in universal use for the purpose of gulletting and gumming saws. Statistics show from 25,000 to 30,000 saw-mills in the United States. Many of these run only a single saw each. A one-saw mill would use one or two wheels a year, costing $3 to $4 each, and when such small mills order single Emery Wheels from the factory, the express charges often equal the cost of the wheel. There was a time when the quality of Emery Wheels was so uncertain, and the demand so fickle, that storekeepers could not afford to carry them in stock. Now, however, Saw Gumming Wheels have become as staple an article as Files, and every dealer in saws, Hardware and Mill Supplies can afford to carry a few dozen standard sizes in stock. Large dealers order stocks of $500 to $750 worth at a time. Saw Gumming Wheels are used with the edge (or face) square, round, or beveled. Probably seven-eighths of all in use are beveled.

The principal sizes are:

8x¼, 8x⅜, 8x½ } ¾ in. hole. 10x¼, 10x⅜, 10x½, 10x⅝ } ¾ in. hole. 12x¼, 12x⅜, 12x½, 12x⅝, 12x¾, 12x1 } ¾, 7/8 and 1 inch. Holes,

Probably more wheels 12x⅜, 12x½ and 12x¾ are used than all the other sizes together. Saw Gumming Wheels are used, however, of all sizes up to 24x1½. The most frequent complaint is that Emery Wheels harden the saw so that a file won't touch it. The answer is that you don't want a file to touch it. An expert workman will shape and sharpen the teeth with an Emery Wheel, leaving the teeth *case hardened*, in which condition the saw will cut about 33⅓ per cent. more lumber than a soft saw will. Those who want to use the file, however, have only to touch the saw *lightly* a second time (after going all over it once), and this second touch will cut through the case-hardened scale.

A QUESTION OF QUALITY.

Thirteen years of experience as makers of, dealers in, and actual users of Emery Wheels, have led us to a decided opinion as to what quality is the best. We prefer for almost every use an "Extra Soft" wheel like the "Pocono." We believe that money lost through the rapid wear of the wheel is more than made up by the money saved on wages. As we cannot get every one to adopt our views, we make several qualities, so as to meet their views. We say to those who think they can only be satisfied with some other make of wheels (not Tanite), that we can furnish qualities *to match* any and every other make. If you have got used to some special quality of wheel, let us know what it is, and we can send you *a Tanite Wheel of similar quality*. Our *regular* classification of Saw Gumming Wheels is as follows:

CLASS 2. MEDIUM—HARD.—This Wheel is THE STANDARD Saw Gumming Wheel all over the world. Probably seven-eighths of all the Saw Gumming Wheels used are "Class 2." It cuts fast and keeps its shape well. Some think it too hard, some too soft. We prefer the "Pocono."

CLASS 3. MEDIUM—SOFT.—The same as to coarseness and fineness as "Class 2," but a *softer*, and therefor freer cutting wheel.

CLASS "POCONO." EXTRA SOFT.—This Wheel we prefer to all others. It is both *finer* in grain and softer than either of the above. As a Saw Gumming Wheel, Class "Pocono" is specially suited to those practical and experienced Sawyers who know how to grind with a light touch, and who want a free cutting wheel that will not create much heat.

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PUBLISHED SEMI-MONTHLY.

The only Newspaper devoted to the Lumber and Timber Industries published in Canada.

SUBSCRIPTION $2.00 PER ANNUM.

VOL. 1. PETERBOROUGH, ONT., AUGUST 1, 1881. NO. 19.

LUMBERMEN'S ASSOCIATIONS.

Failure in business does not always prove a man lacking in business ability, neither does the untimely termination of an organization conclusively establish the want of organizing power and energy in those who have been concerned in the association. Many a business man of fine abilities fails from excess of enterprise. He pushes his business beyond the limit of its endurance before he knows it; he fails because he attempts to do too much. This, we believe, was the cause of the failure of several of the lumbermen's associations to which the *Northwestern Lumberman* alludes. They were too comprehensive. To use an expressive vulgarism, "They bit off more than they could chew." Take the National Association of Lumbermen. There may have been some relations of the members to each other which it did not attempt to regulate, but we do not remember any. It was devoted mainly to the interests of the retail dealers, and had a patent, back-action, double open-and-shut devise for preventing a member doing business anywhere except in his own bailiwick. This was chiefly directed at wholesale dealers, who were subject to be mulcted in a sum equal to the profits on the trade, which was to go to the dealers against whose prerogative they had sinned—the fine being collectable by a process which closely resembles boycotting, since that practice has been invented in Ireland. It amounted to a practical restraint of trade. If a wholesaler sold a bill of lumber to anyone not a dealer within the territory occupied or supposed to be occupied by a dealer, he was directly notified to walk up the captain's office and settle, or he was posted among the association as a man not entitled to their confidence. Theoretically, at least, all the members of the association agreed not to purchase lumber of him until he had shown for the prerogative of the retailer. It is not surprising that an association which proposed thus to interfere with the freedom of trade should fail. It gathered in the ducats of a large number of the retailers by its bewitching promises of promoting their interests and enabling them to corner the home market and unload at their own prices. But the promises it made to the ear were broken to the hope. It had bitten off more than it could chew. The wholesalers, after standing the boycotting a while, concluded the National Association was a menace to their rights and interests, and they formed a counter association. The National Association movement culminated and went to pieces because its foundation was rotten; it was organized for an illegitimate purpose, on unsound principles. The maintenance of such an organization is an impossibility, because it proposed an unnatural and unwarranted interference with the rights of trade.

As we do not think much of associations organized to determine where a man may sell his goods or to whom he may dispose of them, so we have not a high opinion of combinations to determine what price he shall charge for them. They operate as a restraint of trade and subordinate energy and enterprise to indolent conservatism. Combinations to maintain the prices of commodities are not more justifiable than combinations to maintain or advance the price of labor. It is unquestionably of advantage to the trade that there be uniform grades of lumber, that the names of grades shall signify as nearly the same kind and quality of stock as the variable judgment of inspectors will allow, and to secure such a uniformity is legitimate work for an association. It may also be advantageous and justifiable that a uniform basis of prices be established, but the enforcement of any price list established by a combination is beyond the recognition of morality in trade. If the railroads or vessel men, or the workmen enter into combinations to enforce higher prices for transportation or labor, the irregularity of the procedure is recognized at once.

There is no association or combination of lumbermen on the Saginaw river; prices are maintained at a uniform rate without any such extraordinary contrivance. And there is no place where trade may not be safely left to the operation of the legitimate laws governing all trade.

Nevertheless, there is work for associations, and they will organize success when they will attend to those matters which lie within their proper sphere. An association may establish grades; compose price lists without attempting to enforce them; reform as many of the abuses its members suffer at the hands of railroads and other interests, as possible, without invading the rights of others; compile statistics, and disseminate among its members information regarding the condition and prospects of trade, and the best methods of manufacturing and handling the products. Such associations may safely attempt the same line as agricultural societies, but when they undertake to accomplish what trades unions and railroad pools are formed for, they may expect to be classed in the same category and break in pieces as often.—*Lumberman's Gazette.*

MESSRS. RATHBUN & SON manufacture yearly 62,750,000 ft. of lumber and ties, besides shingles, lath, doors, mouldings, sash, blinds, and other goods. They employ in all 1,500 men. They have this season brought 300,000 saw logs and 125,000 pieces of cedar, timber and floats down the Moira, Trent and Napanee rivers.

FOR a city the size of Winnipeg, property seems to be excessively dear. A lot having a frontage of 160 feet on Main street, with a depth of 264 and some buildings valued at about $10,000, has been sold for $110,000.

NOTES BY THE WAY.

SUNDERLAND.

The flourishing village, on the Toronto and Nipissing Railway, 53 miles from Toronto, is supplied with two planing mills. Mr. Moore's planing factory is a very complete establishment, not large, but *multum in parvo*. The machinery is so arranged, that all the woodwork required to finish a house from cellar to garret—with doors, sash, blinds, bannisters, chairs, tables, and bureaus, complete—is manufactured by Mr. Moore and his staff of assistants. Wooden rakes are also made by Mr. Moore in large quantities. There is also a circular saw for cutting small logs, of second growth wood, which is found to be best for rake, hoe, and fork handles. The motive power is supplied by one of Doty's, Toronto, oscillating steam engines.

There are three saw mills in the neighborhood of Sunderland. Mr. A. McMillan's is near the railway station. It is driven by two engines, a portable 12 H.P. and a stationary 25 H.P. The portable engine is taken out after the summer sawing is over, and utilized for threshing grain. Mr. McMillan will cut this season about a million feet of lumber, including lath and shingles.

Mr. Joseph Ruddy's steam saw mill is about two miles south of Sunderland, near the railway. His stock will amount to over 250,000 feet of pine, besides some basswood.

The third saw mill is owned by Mr. James St. John, jr. It is situated about two miles west of the village. The season's cut will be about half a million feet of pine, and five hundred thousand shingles. Mr. St. John, fortunately, has come across a rare and valuable stick of curly-black ash. It is 36 feet long, 3 feet at the butt, sound as a bell, and curly to the core. It will be a choice catch for some wholesale cabinet-maker or railway car builder.

WOODBRIDGE

Being the headquarters of the manufacture of Mr. Abell's celebrated safety engines and threshing machines, the village of Woodbrigde, sixteen miles from Toronto, via the Toronto, Grey & Bruce Railway, has attained considerable importance. Mr. Abell employes one hundred and forty men, and uses a large quantity of lumber in the manufacture of his threshing machines, as well as in covering the outside of the portable boilers to prevent radiation of heat. The factory is complete in all its branches, and possesses an hydraulic engine for boiler making, being the second in Canada of the kind. It performs the work of six men. It is Mr. Abell's intention to remove his Woodbridge establishment to Toronto. He has purchased seven acres of land adjacent to the Lunatic Asylum grounds, south of Queen street. Men are at work preparing 800,000 bricks for the building. The foundation will be of white limestone, from Owen Sound quarries. They are expected to be ready for occupation in two years. Mr. Abell calculates to save $7,000 per annum in freight by the removal to Toronto.

THE ADVANCE IN THE PRICE OF BUILDING MATERIAL.

The railroads have had the advantage of cheap iron for the past three years, and all our industries have had no reason to complain of the cost of material. With a rampant stock market, there has been no speculation up to this time or until very recently, in any of the leading products of the country. Cotton, corn and wheat have ruled low, and when labor was first being employed, it did not demand high figures. But it was evident to all business men that the plethora of money would find its way at length into general merchandise, and there is every evidence now of a steady enhancement in values, especially in manufactured articles, due to the increased cost of labor.

On June 11th the *Real Estate Record* gave the following advice to builders: "It would, we judge, be wise to take large contracts ahead for building material at their present rates. There is every prospect of an enhancement in values during the coming fall, for while consumption is enormous, supplies are light, and as the price of labor is rising in every department of trade, there is a fear of a large enhancement of values."

Those who heeded that warning have reason to congratulate themselves. Take the article of brick. In our market reports we have shown over and over again the dangerous condition of the brick market for buyers. The heavy rains and other causes have prevented the usual work in brick yards, and this occurring in connection with an extraordinary demand for building, has put the buyers of brick entirely at the mercy o those who sell them. This hint ought to be sufficient for all who are under obligations to complete buildings. The increase in the price of labor alone is sure to enhance the value of all the materials which go into the construction of a building. So serious is the brick question, that more than one large concern has put a stop to its work for the time being. Then, the scarcity of labor has led to most extraordinary demands for skilled working people.

As a matter of fact, there is too much building going on. We are overdoing a legitimate and necessary business. There is danger of loss to those who entered into contracts based upon the prices of labor and material which obtained six months ago. Land is rising in value, and the price of labor usually goes up when realty is in better demand. This reacts on all prices, and hence the prudent builder will make contracts for some time ahead.—*New York Real Estate Record.*

The bulk of the World's writing is done with steel pens. Esterbrook's can be procured from any stationer, and at wholesale from Brown Bros., Toronto.

AMONG THE GEORGIAN BAY MILLS.

A party consisting of H. H. Cook, and Robt. Jaffray of Toronto, Mr. McFarlane of the Edinburg *Scotsman*, and representatives of the *Mail* and *Globe*, have been doing our timber country, and from the correspondence in the latter journal we cull the following as likely to prove interesting to our readers :—

THE MIDLAND SAW-MILL.

Our visit to the elevator, the wharfs and the saw-mill were made on Monday evening, when all was lighted up by sixteen electric lights. The saw-mill, which is one of the most extensive in the Province, is owned by the Canadian Lumber Company. This Company was formed about two years since, under the presidency of Mr. H. H. Cook, who handed over to it the extensive lumbering business he had then been carrying on for several years. The capital, a part of which is held in the Old Country, is $1,000,000, one-half being preference stock, on which an annual dividend of ten per cent. must be paid before the other half million of stock can claim any share of the profits.

THE INTERIOR OF THE MILL.

As this mill is a fair specimen of the largest lumber mills in the country, a brief notice of it may serve to give an idea of how these great mills are carried on. There are two storeys, the second one on a level with the extensive platforms which, supported by trestle-work, extend in every direction over the yard. In the lower flat are the engines and various separate machines, or machinery connected with the sawing frames up-stairs. The engines are two in number—one of 120 horse-power and the other of 60.

SAWING UP THE LOGS.

Up-stairs, however, the whole process of sawing is carried on. From the boom along the water front the logs are shoved one by one into an alley of water penetrating the mill. Then by a steam crank and chains they are hoisted up to the second storey and flung rolling upon a sort of platform. At the further end of this is a long car upon which the log rolls, and is placed in a firm position by a wooden arm which comes up through the floor, gives the log a poke and a squeeze in what looks like a clumsily intelligent manner. The log car then moves against a pair of saws, which strip off from two opposite sides of the log the bark and rough wood. When the log has passed the saw it rolls upon a frame work bearing a series of small iron wheels or rollers, which facilitate the movement of the log towards the great sawing machine. A hook now seizes the timber, gives it a shove into its proper position, rolls it upon a long car which is moved slowly up endwise against a wide sawing machine containing a large number of parallel saws adjusted to any required thickness of board. Your correspondent saw a log about four feet thick go through the saw singly, but generally the small size of the logs admits of two or four going through the machine at once. On the other side of the machine the rough boards, such as come off the unsquared parts of the log, are taken to one side and sawn into lengths. On the other side the good boards are thrown upon a small movable platform suspended from a curved iron-way above. They are then swung upon a broad car which moves them up to another sawing machine, over which they pass and are cut into the required lengths, and their rough ends trimmed off. The now finished boards are either shoved down a flume into the lower storey, or out upon cars on the elevated railways, and carried away to the piles which fill up most of the yard.

WHAT IS DONE WITH THE RUBBISH.

Long, shallow boxes reach round the building, and a system of endless chains, attached to which are transverse pieces of wood, scrape all the sawdust, bark and refuse wood out of the building, and either into the boiler room or away over an elevated way into a gigantic furnace nearly a hundred feet high and twenty-eight feet in diameter. The furnace is a round stone tower, narrowing in its upper part into a broad smokestack. A great damper on the ground outside admits the air to beneath the half open flooring of the furnace. At an elevation of forty or fifty feet is an opening through which the endless chain carries the refuse of the mill, and throws it upon an inclined sheet of iron, down which the stuff slides till it falls into the middle of the flames below. The constant falling of heavy boards upon this sheet of iron causes an incessant rumbling noise like the sheet iron thunder of a theatre.

THE HEAT OF THE FURNACE.

Through the openings in the side of this great furnace there stream at night great beams of red light, which produce a weird effect as they fall upon the human figures moving around in the darkness. Inside a circular pit of from twenty-eight feet in diameter and ten or twelve deep is a glowing mass of coal, above which the flames roar and curl, and reach upward fiery tongues as if to lick down the pine fragments falling from the iron slide above.

The enormous destruction of refuse by this furnace at first sight may appear reckless, but in the lumber districts this refuse is worse than a drug, and is burned simply to get rid of it. Throwing it into the water would prove an intolerable nuisance and eyesore along these beautiful shores, and besides would poison the fish.

BRIGHT AS DAY.

We visited the mills at night, and found them lighted by eight Brush electric lights. The whole place seemed as bright as noonday. Even in the shadow the brightness was diffused as is a solar light in the shadows of daytime. Outside, away above the elevated platform, the lights now poured their radiance down upon the mills and trestle works and acres of lumber piles and out on the tens of thousands of logs floating in the booms in the harbour. It was proposed to concentrate the outside lights in one or two high towers, so as to more effectively light up the village and harbour.

SOME FACTS ABOUT THE MILL.

The mill has a capacity of twenty-five million feet per season, and it is expected that eighteen million feet will be produced this year. There are also thirty thousand laths turned out per diem from small pieces of scantling which cannot be sold for lumber. Three hundred men are employed at the mill during the time of navigation. In winter most of these men betake themselves to the woods of the Muskoka and other rivers flowing into Georgian Bay. In these primeval forests the Canadian Lumber Company employs one thousand men all winter. The company has also built a mill at the mouth of the Wye, two miles south-east of Midland. This mill is smaller than the Midland one, having a capacity of only six million feet per annum. Midland has two mills besides that of the Lumber Company. They are owned by Messrs. Cheer Brothers and John Dollar. The two mills together are capable of producing eight million feet per annum.

WHERE THE LOGS COME FROM.

The logs for the mills come from far away in the interior. They are hauled in winter to the streams, and piled along the ice. Every log has upon it the mark of the lumbering firm to which it belongs. These marks are patented, and heavy liabilities are placed upon any one who interferes with them. In the spring the most of the logs are carried down the rivers to the bay, while a special company brings down all the others later, carefully distinguishing as to ownership. The grand collecting booms of the Canadian Company are at Muskwash, eighteen miles from Midland. Here booms of various sizes are made up and towed by a tug belonging to the company to the mills at Midland and at the Wye. Then the booms are floated in behind the long boom that stretches behind the shore with a width of from fifty to three hundred feet.

It may be necessary for the information of the uninitiated to explain that, although square timber is put up in rafts, round logs are not, but are floated in booms. These booms consist of logs connected by chains running through holes in their ends. A boom may thus be constructed for floating logs along the lake, or for confining them in a short strip against the shore.

AN HISTORICAL LOCALITY.

Near this locality are the ruins of an old French fort said to have been built over 250 years ago, but which was abandoned after the garrison had been massacred by the Indians. The masonry is overgrown with trees, and right upon the walls are standing stumps two or three feet in thickness. Three miles further inland an Indian pit containing the skeletons of three thousand of the old aboriginies was discovered a couple of years ago. At the Wye in times long past the Hudson Bay Company maintained a post, of which scarcely a vestage is now remaining. At Victoria Harbor, a few miles further south-east, we found the extensive mills of Mr. Richard Powers. These mills produce 15,000,000 feet of lumber annually. At Sturgeon Bay, a little eastward, are two mills of a capacity of about four millions each.

A MODEL SAWMILL.

At Waubushene we stopped for over half an hour to see the immense mill of the Georgian Bay Lumber Company. The village is a model of taste and neatness. The streets are tidy, and the houses, which are of board, are painted white, and surrounded by white picket fences. Gardens and croquet lawns abound and every evidence of comfort. The village is owned by the Company, which charges no rent to the occupants of the houses, all of whon are employees at the mill. These rent—free tenants are, however, expected to keep their places in good order, under penalty of ejectment in case of negligence. No liquor is allowed to be sold or brought into the village, a regulation which the Company has enforced with excellent results. The appearance of the mill premises is in keeping with that of the village. The mill buildings have painted sides and roofs, and even the trestlework which supports the miles of elevated railway is painted white. The elevated tracks extend along the piles of timber to a distance in all of several miles. The manager, Mr. Peakham, a former resident of Toronto, and who proves himself a most efficient director of the mills, informs us that the railway siding measured between seven and eight miles. The mill's interior sufficiently resembles the Midland mill to make a description superfluous. The motive power is derived from an engine of 350 horse-power. The logs are hauled up from the water into the mill on inclined planes, and keep two endless processions all day long. An endless chain with teeth is used on one of the machines, while the other works with toothed wheels. Adjoining the mills are the warehouse, where supplies are stored, and a smaller building in which the tug boat lies when not in use. The mill has a capacity of about fifteen millions, and employs about one hundred men. The Company has another mill at the Severn, a few miles distant.

WANTED, A SOFT PLACE.

Inquiries come to us almost every week, "wanted a position," "would like to superintend a mill or get into a position where there is a good salary to be had, not very much work to do; am a graduate of——— College, can refer to the Hon. so-and-so, the Rev. so-and-so, etc." There are about two hundred thousand men in the United States, if not a good many more, who are all looking for soft places, and have been looking for soft places ever since they were big enough to keep out of the reach of their mother's slipper, and the very fact of this continued hunt for soft places has cost the American people millions upon millions of dollars. Soft places are not to be had for the asking, and the general construction of this slang phrase is a place with a fat salary and not much work or responsibility. Just the sort of men are always looking for these places that are neither fitted by nature, by culture, qualification or disposition to properly fill them.

The majority of men are satisfied with a salary of from one to three thousand dollars. Sometimes men, with special qualifications, reach five, six or ten thousand in private life or in private business. There are a great many men to-day drawing salaries of from five to twenty-five or thirty thousand dollars who are no more fitted for the position they occupy than an uneducated boot-black is for professor of languages. They are put into these positions by the influence of their friends, so that their clique can control the railroad, manufacturing corporation, or whatever the position may be; and the fact of it is, in a position like this, there is no sort of competition, no chance of merited promotion, and, as a rule, the men who hold these positions would be very expensive at $10 per year, so far as their personal qualifications and worth go. * * *

What we want to-day are men who are fitted by their experience and contact with business to do business, and to manage business. A man who never saw a cotton mill, no matter how smart he is, is unfit to have the management of one. The man who has not had actual experience with a railroad, can not run it, successfully at least, and it does not make any difference whose son-in-law he is, or how much he has learned at some college. We prefer to risk our life on a road managed by a man who has been brought up in the business, and knows what he is doing; and the tendency among railroad managers, to-day, is to seek out this class of men and give them the control of roads, because the man who can run the train himself can teach others how to do it, and he knows also whether they are doing as they are instructed or not.

The man who can erect the machinery in a cotton mill, who can figure his own drafts, twists, changes, etc., is the very man to know whether the people who are working under his direction are doing their work as they should do it or not.

We take the ground that it is no disgrace to a man to have a collegiate education. The majority of men form habits during their attendance upon the average college which are not any particular benefit to them all through life, and the simple fact that a man has been through college, and has graduated, is no sort of a warrant to a cotton spinner, a machine maker, a railroad or steamship manager, that that man is any more fit to take practical charge of either one of these matters than as though he had never seen college, except insomuch as he may be able to write or figure better. The certainties are that he will not know as much or as well about doing the routine work required as some man who has been for several years employed in a line of business which gives him familiarity with what he is in daily contact with. And other things being taken as equal, we would prefer, if we were to choose editorial assistants, to take from the ranks men who were familiar with the manipulations of machinery, men who knew the difference between a wheel-barrow and a front roll, a monkey-wrench and a water-wheel, than to take the best educated collegian who knew only his Greek and Latin—and perhaps very indifferently at that—for the man who had been several years working with his hands and his brains, has formed habits that will stick to him through life; he is better able to cope with difficulties, he is less liable to err in judgment, and his judgment is apt to be keener and clearer than the man who has, up to the time of his leaving college, depended entirely upon somebody else for every thing.

Capitalists and business men are getting to take this view of matters, and within the last two years men who have been expecting soft places or desirable positions, have had to stand back and see men who have been in the work promoted. As a matter of fact, the last seven or eight years have taught capitalists and stockholders that we have been on the wrong track. They have switched off; they are running more upon common-sense principles than ever before, and the man who requires a soft place hereafter will have to work for it, and not only make himself fit to be promoted, but fit to hold the place after he has been put into it.

Men who have never been obliged to depend upon themselves, are not men to be trusted with the working out of important problems. Men who have been compelled to earn their own living and to get their education by such means as good books and papers, out of working hours, not only learn faster, but what they learn they are sure of. Seemingly soft places are not always so soft as they appear to be; and if a man is capable of holding a position, the surest way for him to get it is to attend strictly whatever he has in hand, and he may be assured that his time will come from some source or other, and it will most likely come when he least expects it.—*Boston Journal of Commerce.*

At the annual meeting of the stockholders of the Longford Lumber Co. the other day, Mr. Wm. Thompson was appointed President, in the place of his father lately deceased, and Mr. Maxwell Hall, formerly of Peterboro, Secretary.

Mr. George Stethem, of Peterborough, asks any mill-owner using leather belting to try Jewell's (Hartford, Conn.,) oak tanned; from 4 to 12 inch in stock. No matter how small the order. Satisfaction guaranteed.

THE SCOTTISH PINE.

Erect he stands, 'mid scenes so wild,
On Nature's bulwarks grey;
His plume waves in the northern breeze,
The shadows round him play.

The blacken fern and blackberry
Spring up about his feet,
While heath-crowned rocks, or hoary crags,
O'er head oft nearly meet.

The storms that blow so fierce and strong,
Round many a summit bare,
Sweep down upon him. Yet he stands
Unvanquished monarch there.

O'er many a glen his sceptre sways;
Lone Rannock, wild Braemar,
The banks of Spey, and crooked Glass,
Lochiel, Glenroy, Cromar.

Although he loves his Highland hills,
'Mong purple heath to stand,
Yet we oft meet his stalwart form
Far from his native land.

Give him the welcome he deserves,
He's always brave and true;
Where others fall, victorious he,
Shall save his bonnet blue.

A DURABLE WHITEWASH.

To the Editor of the Scientific American.

In regard to the query of C.B.C., in your last number, in relation to whitewashing, I believe I have tried every known wash. The so-called White House stucco wash is no better than any ordinary whitewash. No brick wall that ever is intended to be painted should be whitewashed. All washes absorb water, and in damp weather lose their color.

The best wash that I have ever heard of is made as follows: For one barrel of color wash—half a bushel white lime, 3 pecks hydraulic cement, 10 pounds of umber, 10 pounds ocher, 1 pound Venetian red, quarter pound lampblack.

Slake the lime; cut the lampblack with vinegar; mix well together; add the cement, and fill the barrel with water. Let it stand twelve hours before using, and stir frequently while putting it on.

This is not white, but of a light stone color, without the unpleasant glare of white. The color may be changed by adding more or less of the colors named, or other colors. This wash covers well, needing only one coat, and is superior to anything known, excepting oil paint.

I have known a rough board barn washed with this to look well for five years, and even longer, without renewing.

The cement hardens, but on a rough surface will not scale.

Cincinnati, Ohio, July, 1881. T. G.

Population and Temperature.

A census bulletin shows the distribution of population in the United States in accordance with temperature. Arranging it in groups by 5 degrees of mean annual temperature, it is found that no less than 98 per cent. of the total population live between lines marked by 40 and 70 degrees Fah. The cotton region is above 55 degrees, sugar and rice above 70 degrees, and tobacco between 50 degrees and 60 degrees. The prairie region of the Mississippi valley almost entirely below 55 degrees, while the great wheat region of Minnesota and Dakota is mainly below 50 degrees of mean annual temperature. The highest maximum temperature is in southwestern Arizona and southeastern California. Of the entire population, 89 per cent. are found in the classes which have maximum temperature between 95 degrees and 105 degrees. In considering minimum temperature, it is seen that 95 per cent. of the inhabitants of the United States live between the lines of 35 degrees below zero and 10 degrees above, for extreme cold.

From this it is evident how population tends to increase in regions rather north of medium temperature; or, more correctly speaking, between isotherms of low degree.

THE MOST PLEASANT, rapid, reliable and effectual remedy yet discovered for diarrhœa, dysentry, cholera morbus, cholera infantum, and all summer complaints, is Dr. Fowler's Extract of Wild Strawberry. It is unsurpassed as a reliable specific in the above diseases, it is well known as a great remedial agent, and is more highly valued the longer it is known. Travellers and tourists should carry a supply in their haversack. For sale by all dealers in Medicines

A BARGAIN—GRIST AND SAW MILL FOR SALE, paying 12 per cent. clear; price $9,000; and above percentage guaranteed. Apply to

JOSEPH DAVIES & Co.,
Lumber, Coal, & Commission Merchants,
46 CHURCH ST. TORONTO. 1yL16

Wanted.

A SECOND HAND DOUBLE EDGER; also a LATH MACHINE, both in good repair. Reply stating lowest cash terms or particulars to Box 1002, Peterborough. L10

For Sale.

A 40 INCH LEFFELL WHEEL and COMPLETE CIRCULAR RIG, all in good order, suitable for a fifteen foot head. Apply to Box 1002, Peterborough. L10

Orillia House,

ORILLIA.

New and Commodious Brick Building; best north o Toronto; splendid sample rooms; centrally located; free 'bus. b20 JOHN KELLY, Proprietor.

The Queen's Hotel,

TORONTO, CANADA.

McGAW & WINNETT, Proprietors. Patronized by Royalty and the best families. Prices graduated according to room. b20

St. Lawrence Hall,

PORT HOPE.

Is noted for its superior home-like comforts—a well kept table, equalling the best hotels in Toronto, and large, well-furnished rooms. Good sample rooms on ground flour. Walton Street, Port Hope.
b26 WM. MACKIE Propr,ietor.

Caledonian Hotel,

GRAVENHURST.

JOHN SHARPE, Proprietor. This Hotel has been newly opened out, pleasantly situated on Main Street, within five minutes walk of Northern Railway station. Bar kept with best assorted Wines, Liquors and Cigars. Every attention paid to guests. Good Stabling. 1yL15

St. Louis Hotel.

THE RUSSELL HOTEL CO., Proprietors.
WILLIS RUSSELL, Pres., Quebec.

This hotel, which is unrivalled for size, style and locality in Quebec, is open throughout the year for pleasure and business travel. b18

Queen's Hotel,

BRACEBRIDGE.

JOHN HIGGINS, Proprietor. The proprietor (late of Georgetown,) having lately purchased the above hotel,) will endeavor to make it one of the best houses in the District of Muskoka. Tourists and hunting parties will receive every possible attention. Free 'bus to and from steamboat wharf. Terms, $1 per day. b20

The American Hotel,

BARRIE, ONT.

Collier Street, Adjoining the Market.

RATES REASONABLE, CENTRAL LOCATION, FREE BUS TO AND FROM ALL TRAINS.

☞ Every accommodation for Commercial and LUMBERMEN.
L14 W. D. McDONALD, Proprietor.

Fraser's Hotel,

GRAVENHURST, ONT.

HENRY FRASER, proprietor, (successor to Dougland Brown.) Mr. Fraser having purchased and thoroughly renovated and refitted that old established hotel, so long and popularly kept and owned by Dougland Brown, in the Village of Gravenhurst, is now in a position to attend to the wants of the travelling and general public. Parties *en route* to the Muskoka District, will find "Fraser's" a comfortable stopping place. The Bar and Larder are well furnished. Convenient Sample Rooms for Commercial Men. Good stabling and attentive hostler. Free 'bus to and from trains and steamboats. b26

Mill Property for Sale.

That Steam Saw Mill, at the Village of Cumberland, formerly owned by BURTON & WATSON, with all the Machinery, and also Wharf, Store-house, and several Cottages on the property. Apply to the Union Bank of Lower Canada.
2L19 M. A. ANDERSON, Manager.

E. S. VINDIN,

Commission, Shipping, Forwarding and General Agent.

LUMBER MERCHANT

Office, Tempest's Block, Port Hope. L11

D. S. BRIGGS,

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WHOLESALE DEALER IN

Clear, Pickings, Common and Hardwood Lumber, Lath, Shingles, &c.

BILL STUFF CUT TO ORDER.
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Containing the latest and most authentic descriptions of over SEVEN THOUSAND FIVE HUNDRED CITIES, TOWNS and VILLAGES, and of over EIGHTEEN HUNDRED LAKES and RIVERS in the Dominion of Canada; a TABLE OF ROUTES shewing the proximity of the RAILROAD STATIONS, and SEA, LAKE and RIVER PORTS to the CITIES, TOWNS and VILLAGES, and a neat COLORED MAP OF THE DOMINION.

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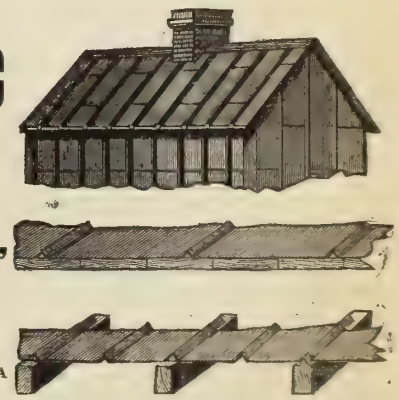

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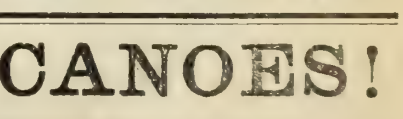

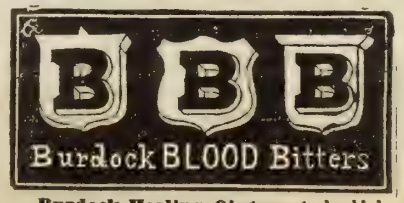

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CANOES!

The undersigned keeps Canoes suitable for LUMBERMEN, SPORTSMEN and others constantly on hand. Price List on application.

WILLIAM ENGLISH
148L PETERBOROUGH, ONT.

DESERONTO.

A GREAT WOOD CENTRE—RATHBURN & SON'S EXTENSIVE OPERATIONS—WHAT ENTERPRIZE AND ENERGY HAVE DONE.

About the year 1848 H. B. Rathbun, Esq., arrived in these parts, seeking a site to establish himself in the lumbering business. Picton, Napanee, Belleville and other points were all approached in turn, but none would offer a suitable site or hold out sufficient inducements to secure the location of his business, and he consequently settled at Culvertson's. Facts have since proven that in giving Mr. R. the cold shoulder, is just when the other corporations missed their golden opportunity.

ITS GROWTH.

The original saw mill, which was of a primitive character, was soon found to be entirely inadequate for the requirements of their business, and was therefore replaced by one of a more approved pattern, and supplied with better machinery. In the year 1872 this mill with the other shops which had been added, together with the lumber surrounding them, was entirely consumed by fire, but the buildings and machinery were immediately replaced by a more substantial structure, fitted up with all the economical and labor-saving machinery known to the business.

THE BIG MILL,

as it at present stands, is built of stone, covered with an iron roof, and with the excellent facilities for avoiding and overcoming fire, is as safe from the destructive element as it is possible to make it. The size of the main building is 173x137 feet. The sawing floor is 145 feet long by 90 feet wide. The sawing machinery consists of 165 gang saws, and 38 small circulars, for edging, making lath, etc. The machinery for handling the logs is the most effective and economical in time and labor known to the business, while the arrangements for sorting and carrying off the manufactured lumber and the refuse is complete. An elevated railway was constructed a little over a year ago for conveying the edgings, etc., to the adjacent wharves for convenient shipment to the steamers which use them as fuel, and for shipment to other places where large quantities are consumed as firewood. The product of the mill for the year 1881 will be at least 28,000,000 feet of pine lumber, besides lath, barrel heads and short lumber, running by day only. Not a single inch of lumber which is adapted to any use is allowed to go to waste, and even the sawdust is henceforth to be utilized and turned into a valuable commodity which will give it a market value.

DRY KILNS.

South of the mill are five large dry kilns for the quick seasoning of lumber. The bay, in the immediate vicinity of the mill, furnishes ample storage room for the large quantity of logs required to keep the mills in operation during the season.

BLACKSMITH SHOP AND BOILER ROOM.

Adjoining the "big mill" and to the east of it, is the blacksmith shop and boiler rooms. These are filled with the best machinery, such as steam hammers, &c., for the building of the largest boilers and other machinery, and making necessary repairs. A large staff of skilled mechanics are employed.

MACHINE SHOP.

If there is one department in which Messrs. Rathbun endeavor to excel, it is in their machinery department. No trouble or expense is counted loss in securing the services of the most skilled artizans, to perfect not only the machinery of their own establishment, but of the steam vessels which are entrusted to their workmanship. Some of the very best marine engines employed on the bay and lake service are from this establishment, and the satisfaction which they are giving is the best proof of their excellence. They are at present engaged upon a large double engine to be placed in a freight and passenger propeller now on the ways, and to be employed by the Deseronto Navigation Company, between Oswego and the bay ports. Repairs are promptly executed in this department, and already the firm has established a wide reputation among marine men.

PLANING MILL AND SASH AND DOOR FACTORY.

To the north of the machine shop is the planing mill and sash and door factory. This is an industry which has been in operation only a short time, but it promises soon to rival even the big mill in the range of its products, and its importance to the future of this place. A trade in this line has been opened up with Great Britain, Australia, New Zealand, and other countries, and as the foreign demand is practically unlimited and is constantly increasing, the possibilities of this trade cannot be estimated. Shipments are made weekly to all parts of the globe, and the facilities for production have to be constantly increased to meet the demand. The following is the product of this mill during 1880 :—

Doors	25,000
Turned Maple Rods	60,000 pieces.
Chair Stretchers	100,000 "
Mouldings	600,000 feet.
Broom Handles	75,000
Window Sash	7,000
" Blinds	4,500
Matched Flooring	3,000,000 feet.

This year they will turn out lath, 10,000,000 ; doors, 40,000 ; besides sash, mouldings, &c. A large part of the above was exported to European countries and the antipodes.

To the east of the collection of mills is located the

SHIP YARD

where on an average about forty men are constantly employed, and a large number of steam and sailing vessels have been constructed during the past few years. Perhaps half of the bay fleet now employed in the bay and lake trade is from this yard, and the industry is increasing year by year. A large freight and passenger propeller is now on the way, and it is expected she will be completed for business some time in August, to be ready for the fall trade. An immense repairing business is done at this yard.

THE CEDAR MILL

is located just east of the ship yard. Unlike the "big mill" this is kept in operation throughout the year, and the amount of manufactured material turned out is enormous. For the season of 1881, they expect to turn out 12,000,000 feet of ties and lumber.

Besides the above the Messrs. Rathbun & Son have contracts for the delivery of cedar ties and lumber from outside mills amounting to 10,000,000 feet.

During the year 1881 they will manufacture 20,000,000 shingles.

OTHER MILLS.

Besides the above mills Messrs. Rathbun & Son own the Eagle Mills at Ferry Point, and the Walbridge at Shannonville is operated for them. At the former they will saw 12,000,000 feet of lumber this year, and at the latter 75,000 feet. The magnitude of all the figures—the product of Messrs. Rathbun's Mills, can be scarcely comprehended even by those who are accustomed to lumbering operations on a large scale, for instance we have the

Big Mill	28,000,000
Cedar Mill, ties and lumber	12,000,000
Bagle Mill	12,000,000
Wallbridge's Mill	750,000
Contract for ties and lumber	10,000,000

Making a grand total of 62,750,000 feet of lumber and ties, besides the lath, shingles, doors, sash, blinds, moulding and other goods which are in constant course of manufacture. In their mills at Deseronto they now employ about 500 men, and in all their operations about 1,500 hands on the average are kept constantly employed. The operations of the firm are amazing to the novice, and an inspection of the mills and factories is always interesting. We have several times had the pleasure of visiting the mills, and have always found both proprietors and employees willing, courteous and obliging to visitors, and those who can make it convenient to visit the village and make a tour of inspection will be well repaid for their trouble.

We almost forgot to mention that the logs that will be brought down the Napanee, Moira and Trent waters this year by the firm will aggregate 300,000 pieces, besides 125,000 pieces of cedar, timber and floats.

THE STABLES.

An important adjunct to the other interests of the place is the stables of the firm. These are located just east of the road and are the most extensive and complete in their equipment of any to be found in the province. The stable is 40x140 feet—two stories high, with horse fork and other apparatus for hoisting feed, and is provided with granary, root cellar, harness room, straw cutter, etc. About eighty horses and mules are kept stabled here, and from an inspection of the stock we know that the firm has some of the finest draft horses in the district. They also keep some good road stock. The animals are kept in excellent condition.

THE GRIST MILL.

This is Messrs. Rathbun and Son's latest enterprise, and it is one of greatest importance. The mill is situated in the eastern portion of the village Deseronto, and is a substantial stone structure, 45x70 feet, four stories in height the stories ranging from twelve to sixteen feet high. At the north end of the building is the engine-room, also of stone, 40x40 feet. To the south or rear of the mill, on the water front is the elevator, entirely sheeted with iron, 50x60 feet, forty-five feet high, and surrounded by a cupola twenty-two feet high. This elevator has a storage capacity of 45,000 bushels, and the mill is supplied with wheat from it by means of an iron screw conveyor, which passes into the mill in the third storey. About sixty-five feet west of the mill is a bran and flour warehouse, 40x60 feet, forty-five feet high. The upper portion is used for the storage of bran, and has a capacity of 400 tons, while the lower portion is intended for a flour warehouse, having the capacity for from 1800 to 2,000 barrels. This mill operates on a system which is entirely new in the Dominion at least, and very few such mills are in operation on this continent. Instead of employing stones in grinding, the kernel is crushed, by means of a series of iron rollers revolving at great speed, and which gradually reduce the grain to flour of the finest and purest grade. This mill has twelve setts of these rolls, and is regarded by milling experts as one of the most complete on the continent. The sample of flour turned out in every day work equals the finest brands manufactured, and is, in every way, of superior quality. The mill is now turning out daily an average of 125 barrels. In an article upon this mill the *Milling World* says :—

"The mill, in the fullest sense of the word, is a model, and reflects credit upon its proprietors for the liberal spirit evinced in its fitting up, and upon its designer for the perfet manner in which every portion of the machinery performs its allotted functions. The Deseronto mills are unquestionably far in advance of home competition. The Messrs. Rathbun are to be congratulated upon the ownership of the finest mills in Canada."

The location of these mills in our midst is an advantage which should be appreciated by both producers and consumers. The quality of flour produced is unquestionably the finest and best in the market. Another advantage is that farmers taking their grists to the mill will immediately have the proper amount of flour weighed out to them, and may return to their homes without delay.

THE GRAIN ELEVATOR

adjoining the grist mill is also a public accommodation which the people of this district are not slow to appreciate, as it increases competition for their staples, and enables them to get full value for their productions.

THE COAL TRADE.

Messrs. Rathbun & Son engage largely in the coal trade and have coal sheds at Deseronto, Belleville, Napanee, Kingston, Gananoque and other points. Last year they handled about 20,000 tons of coal, and the prospects are they will handle a much larger amount this year.

THE DOCKS.

Nowhere are the improvements which Messrs. Rathbun & Son have effected in Deseronto more noticeable than in the magnificent docks and wharves which they have constructed. These now reach over a mile and a half in length, and are of the most substantial character, having been built for permanency and not for temporary accommodation. These are constantly filled with huge piles of lumber, and it is a rare thing indeed for a visitor to call at the village and fail to find vessels loading lumber therefrom for foreign parts. The steamboat landing and storehouse is the principal point of attraction, but our space will not admit of a detailed description of this. Suffice it to say that it is one of the most convenient and commodious on the Bay. They have also extensive docks at Belleville, Napanee, Kingston, Gananoque and other places. Directly opposite the steamboat wharf is an immense coal shed, of very substantial construction,

THE BIG STORE.

Messrs. Rathbun & Son are also the proprietors of a large store in the village, through which they supply their employees and the public with everything from a needle to an anchor.

BANKING.

The firm has also within the past few months added banking to their other business, which is found to be a great accommodation to the people of the village.

THE OFFICE.

Their offices are at present located in a one storey building between the big mill and the steamboat wharf, but we are informed that the firm contemplate erecting, at no distant date, a large and commodious suite of offices possessed of more conveniences than the present business quarters.

Every department in their mills is connected with Mr. Rathbun's private office by means of a Bell telephone, so that orders and directions may be given promptly by word of mouth.

DESERONTO NAVIGATION COMPANY.

The business of the firm of Messrs. Rathbun & Son is of itself sufficient to keep a whole fleet of steam and sailing vessels employed. Until very recently, nearly the whole of their immense transportation business was done by steamers owned by the firm. Last year, however, a new company styled the "Deseronto Navigation Company," was organized, composed principally of Messrs. Rathbun & Sons and their employees, and the principal steamers are now under control of the company. The principal of these are the steamers *Armenia*, between Deseronto and Ogdensburg, tri-weekly ; the *Deseronto*, between Picton and Trenton, daily ; the *Pilgrim*, between Deseronto and Napanee, and the steam barge *Norman*. The Company has another large propeller on the way which, it is expected, will be completed in August. She is intended for passengers and freight, and will be run between Oswego and Bay ports. The engines have been constructed in Messrs. Rathbun & Son's machine shops, and are nearly ready to be set up. R. C. Carter, Esq., is manager of the Company, and the steamers being swift and commodious, and so placed that they make sure and convenient connections, they are fast becoming popular with the travelling public. The route of the *Armenia*, passing through the Thousand Islands by daylight, both going and returning, is particularly pleasant. F. S. Rathburn, Esq., is Secretary-Treasurer of the Company.

THE FARM.

Messrs. Rathbun & Son have, within the past two or three years, added a magnificent farm to the other industries. The farm is located immediately north of the village, and contains two hundred and thirty acres of the very best arable land to be found in this favored agricultural district. An experienced manager has been engaged, and already the transformation that has taken place is amazing to those who have been content to spend their lives plodding along on the old system. Messrs. Rathbun & Son have undertaken to test the value of scientific farming in Canada. They have some excellent thoroughbred stock, and in every respect the farming operations are carried on in the most approved principle. It will not take many years for Messrs. Rathbun & Son to make their farm the model of the Bay district, if not the Province. Like every other department of their business, the aim is to make the farm self-sustaining, and we are assured this object will not be lost sight of in its management, as is too often the case in farming on scientific principles.

RAILWAY CONNECTION.

Until now Deseronto has depended entirely upon water communication for their intercourse with the outside world, but it has been a fact patent to all that this state of affairs would not be long tolerated. Last year the village granted a handsome bonus to secure connection with the Grand Trunk Railway, and with the promptness which marks all their enterprises, the contract for grading has already been given out, the ties are upon the route, and in a few weeks—two or

three months at farthest—the citizens will hear the snort of the iron horse entering their village. The railway is to be furnished with steel rails, and will be in every respect a first-class road.—*Napanee Beaver.*

THE TREATMENT OF SEA SICKNESS.

The *Tribune* has been making inquiries among prominent physicians touching the cause and cure of sea sickness:

"What advice in regard to sea sickness would you give a patient going to sea?" was asked of Dr. Alonzo Clark.

"I should tell him to take a wash basin into his stateroom," responded Dr. Clark, cheerfully.

"Then there is no remedy?"

"One remedy, yes—to stay ashore." Dr. Clark continued: "I think people will be sea sick until the millennium comes. The disorder is in a way a puzzle to doctors. It is caused by a disordered action in the brain and nervous system, and the stomach feels it as a part supplied with nerves. There is no perceptible change in the nerve tissue, but a nerve disturbance, and probably all the brain is affected. It is unaccountable that the practice of going to sea cures the disorder, although this may be owing to a circulatory accommodation. I have never made use of the various remedies suggested. Sea-sickness is modified by a low diet, and if health is much depressed the patient should keep his bed. Food should be taken as constantly as possible, and the best form is soup with toasted crackers. Any alcoholic drink will soothe some stomachs. The supposed benefit to be derived from sea-sickness amounts to very little, except, perhaps, in the case of large feeders. Of course, land sickness, caused by riding backward and in railway cars, is practically the same as sea-sickness. An instance has been related of a woman cured by wearing a sheet of paper over her chest, which illustrates the power of faith."

Dr. Geo. M. Beard said: "A year ago there was no disease of which so little was known and which was so incurable as sea-sickness; now there is no disease of which so much is known and which is so perfectly curable. It is a functional disease of the central nervous system, mainly of the brain, but sometimes also of the spinal cord, and comes from purely mechanical and physical causes, being a result of a series of mild concussions. No more benefit can be derived from it than from an attack of typhoid fever. Infancy and old age are least affected by it, and it is most frequent and severe with the nervous and sensitive. In some cases there is simply congestion of the brain. The chief symptoms are headache, backache, nausea, vomiting, pain in the eyes, mental depression, neuralgic pains, sleeplessness, and nervous exhaustion. Dr. F. D. Lente, of Florida, first suggested the use of bromide of potassium as a preventive of sea-sickness in voyages between the North and South, and it was used with good results. This had also been recommended by Dr. Parker, who carefully studied the subject. My experience had led to my developing this treatment for long voyages and suggesting bromide of sodium in large doses instead of bromide of potassium. The former is less irritating to the stomach and contains more bromine than the latter, but when not procurable bromide of potassium may be used. The patient should take thirty, sixty, or ninety grain doses of bromide of sodium three times a day a few days before embarking and keep it up at sea until the danger seems to be past. The result aimed at is a mild bromization of the central nervous system, rendering it less susceptible to the disturbances caused by the movements of the ship. There is a great difference in people about the effect, and the great point is to know when to stop taking it, avoiding an excess, and not to take too little. A few people have an idiosyncrasy against bromide, bus there is little or no danger from its use if patients will carefully watch for the sleepiness and indisposition for exercise which are the symptoms of mild bromization. I have known of but one failure from the proper use of bromides, and I have here several letters from persons who have crossed safely by their use, although always sick before. Of course the drug should be taken intelligently and under competent directions, as there is a great difference in different people, and every case ought to be studied separately so far as possible."

"What is sea-sickness?" was asked of Dr. Wm. A. Hammond.

"Well, I should call it a disorder of the nervous system."

"Is there any remedy!"

"I can't lay down rules for other people, but I can tell what I have found beneficial in my own case, and that is ten or fifteen drops of chloroform on lump sugar, and the use of bromide of potassium."

Overworking the Undeveloped Brain.

"Overwork," properly so-called, can only occur when the organ upon which the stress of the labor falls is as yet immature, and, therefore, in process of development. When an organ has reached the maturity of its growth in can only work up to the level of its capacity or faculty for work. Fatigue may produce exhaustion, but that exhaustion will come soon enough to save the organ. Repeated "efforts" may, under abnormal conditions, follow each other too rapidly to allow of recuperation in the intervals of actual exertion, and as the starting point will, in each successive instance, be lower than the previous state, there may be a gradual abasement; but even this process should not seriously injure a healthy and well developed organ. In short, a great deal of nonsense has been said and written about the "overwork" of *mature* brains, and there are grounds for believing that an excuse has been sought for idleness, or indulgence in a valetudinarian habit, in the popular outcry on this subject, which awhile ago attracted much attention. Nevertheless there can be no room to question the extreme peril of "overwork" to growing children and youths with *undeveloped* brains.

The excessive use of an immature organ arrests its development by diverting the energy which should be appropriated to its growth, and consuming it in work. What happens to horses which are allowed to run races too early, happens to boys and girls who are overworked at school. The competitive system as applied to youths has produced a most ruinous effect on the mental constitution which this generation has to hand down to the next, and particularly the next but one ensuing. School work should be purely and exclusively directed to development. "Cramming" the young for examination purposes [colledge students at this time of year take heed.—ED.] is like compelling an infant in arms to sit up before the muscles of its back are strong enough to support it in the upright position, or to sustain the weight of its body on its legs by standing while as yet the limbs are unable to bear the burden imposed upon them. A crooked spine or weak or contorted legs is the inevitable penalty of such folly. Another blunder is committed when one of the organs of the body—to wit, the brain—is worked at the expense of the other parts of the organism, in face of the fact that the measure of general health is proportioned to the integrity of development, and the functional activity of the body as a whole in the harmony of its component systems. No one organ can be developed at the expense of the rest without a corresponding weakening of the whole.—*Lancet.*

A Wood-Splitting Machine.

A novelty in mechanics is a wood-splitting machine, which E. W. Peck has used near Cambridgeburgh, Vt. It acts exactly upon the guillotine principle. An enormous axe, weighing with its fixtures 200 pounds, runs up and down between two uprights, and is controlled by a pair of levers. As the section of a log drops from the buzz saw, it rolls down an incline to the splitter. Here a workman places it under the axe, which, descending, splits it with incredible ease and despatch. The toughest and knottiest "old settlers," which it would take a man half a week to split with an ordinary axe, are disposed of in a second. The rapidity with which it works may be imagined from the fact that it can split wood as fast as it can be sawed in a mill. It does as much work in a given time as twenty men can accomplish.

According to the Louisville *Courier-Journal*, a good deal of the black walnut in Kentucky is utilized in fence rails.

Department of the Interior,

OTTAWA, 25th May, 1881.

WHEREAS circumstances has rendered it expedient to effect certain changes in the policy of the Government respecting the administration of Dominion lands, public notice is hereby given:—

1. The Regulations of the 14th October, 1879, were rescinded by order of His Excellency the Governor General in Council, on the 20th day of May instant, and the following Regulations for the disposal of agricultural lands substituted therefor:

2. The even-numbered sections within the Canadian Pacific Railway Belt—that is to say, lying within 24 miles on each side of the line of the said Railway, excepting those which may be required for wood-lots in connection with settlers on prairie lands within the said belt, or which may be otherwise specially dealt with by the Governor in Council, shall be held exclusively for homesteads and pre-emptions. The odd-numbered sections within the said belt are Canadian Pacific Railway Lands, and can only be acquired from the Company.

3. The pre-emptions entered within the said belt of 24 miles on each side of the Canadian Pacific Railway, up to and including the 31st day of December next, shall be disposed of at the rate of $2.50 per acre; four-tenths of the purchase money, with interest on the latter at the rate of six per cent. per annum, to be paid at the end of three years from the date of entry, the remainder to be paid in six equal instalments annually from and after the said date, with interest at the rate above mentioned on such portions of the purchase money as may from time to time remain unpaid, to be paid with each instalment.

4. From and after the 31st day of December next, the price shall remain the same—that is $2.50 per acre—for pre-emptions within the said belt, or within the corresponding belt of any branch line of the said Railway, but shall be paid in one sum at the end of three years, or at such earlier period as the claimant may have acquired a title to his homestead quarter-section.

5. Dominion Lands, the property of the Government, within 24 miles of any projected line of railway recognized by the Minister of Railways, and of which he has given notice in the *Official Gazette* as being a projected line of Railway, shall be dealt with as to price and terms, as follows:—The pre-emptions shall be sold at the same price and on the same terms as fixed in the next preceding paragraph, and the odd-numbered sections shall be sold at $2.50 per acre, payable in cash.

6. In all townships open for sale and settlement within Manitoba or the North-West Territories, outside of the said Canadian Pacific Railway Belt, the even-numbered sections, except in the cases provided for in clause two of these Regulations, shall be held exclusively for homestead and pre-emption, and the odd-numbered sections for sale as public lands.

7. The lands described as public lands shall be sold at the uniform price of $2 per acre, cash, excepting in special cases where the Minister of the Interior, under the provisions of section 4 of the amendment to the Dominion Lands Act passed at the last session of Parliament, may deem it expedient to withdraw certain farming lands from ordinary sale and settlement, and put them up for sale at public auction to the highest bidder, in which event such lands shall be put up at upset price of $2 per acre.

8. Pre-emptions outside of the Canadian Pacific Railway Belt shall be sold at the uniform price of $2 per acre, to be paid in one sum at the end of three years from the date of entry, or at such earlier period as the claimant may acquire a title to his homestead quarter-section.

9. Exceptions shall be made to the provisions of clause 7, in so far as relates to lands in the Province of Manitoba or the North-West Territories, lying to the north of the belt containing the Pacific Railway lands, wherein a person being an actual settler on an odd-numbered section shall have the privilege of purchasing to the extent of 320 acres of such section, but no more, at the price of $1.25 per acre, cash; but no Patent shall be issued for such land until after three years of actual residence upon the same.

10. The price and terms of payment of odd-numbered sections and pre-emptions, above set forth, shall not apply to persons who have settled in any one of the several belts described in the said Regulations of the 14th October, 1879, hereby rescinded, but who have obtained entries for their lands, and who may establish a right to purchase such odd-numbered sections or pre-emptions, as the case may be, at the price and on the terms respectively fixed for the same by the said Regulations.

Timber for Settlers.

11. The system of wood lots in prairie townships shall be continued—that is to say, homestead settlers having no timber on their own lands, shall be permitted to purchase wood lots in area not exceeding 20 acres each, at a uniform rate of $5 per acre, to be paid in cash.

12. The provision in the next preceding paragraph shall apply also to settlers on prairie sections bought from the Canadian Pacific Railway Company, in cases where the only wood lands available have been laid out on even-numbered sections, provided the Railway Company agree to reciprocate where the only timber in the locality may be found on their lands.

13. With a view to encouraging settlement by cheapening the cost of building material, the Government reserves the right to grant licenses from time to time, under and in accordance with the provisions of the "Dominion Lands Act" to cut merchantable timber on any lands owned by it within surveyed townships; and settlement upon, or sale of any lands covered by such license, shall, for the time being, be subject to the operation of the same.

Sales of lands to Individuals or Corporations for Colonization.

14. In any case where a company or individual applys for lands to colonize, and is willing to expend capital to contribute towards the construction of facilities for communication between such lands and existing settlements, and the Government is satisfied of the good faith and ability of such company or individual to carry out such undertaking, the odd-numbered sections in the case of lands outside of the Canadian Pacific Railway Belt, or of the Belt of any branch line or lines of the same, may be sold to such company or individual at half price, or $1 per acre, in cash. In case the lands applied for be situated within the Canadian Pacific Railway Belt, the same principle shall apply so far as one half of each even-numbered section is concerned—that is to say, the one-half of each even-numbered section may be sold to the company or individual at the price of $1.25 per acre to be paid in cash. The company or individual will further be protected up to the extent of $640, with six per cent. interest thereon till paid, in the case of advances made to place families on homesteads, under the provisions of section 10 of the amendments to the Dominion Lands Acts hereinbefore mentioned.

15. In every such transaction, it shall be absolutely conditional:—

(*a.*) That the company or individual, as the case may be, shall, in case of lands outside of the said Canadian Pacific Railway Belt, within three years of the date of the agreement with the Government, place two settlers on each of the odd-numbered sections, and also two on homesteads on each of the even-numbered sections embraced in the scheme of colonization.

(*b.*) That should the land applied for be situated within the Canadian Pacific Railway Belt, the company or individual shall, within three years of the date of the agreement with the Government, place two settlers on the half of each even numbered section purchased under the provision contained in paragraph 14, above, and also one settler upon each of the two quarter sections remaining available for homesteads in such section.

(*c.*) That on the promoters failing within the period fixed, to place the prescribed number of settlers, the Governor in Council may cancel the sale and the privilege of colonization, and resume possession of the lands not settled, or charge the full price of $2 per acre, or $2.50 per acre, as the case may be, for such lands, as may be deemed expedient.

(*d.*) That it be distinctly understood that this policy shall not only apply to schemes for colonization of the public lands by Emigrants from Great Britain or the European Continent.

Pasturage Lands.

16. The policy set forth as follows shall govern applications for lands for grazing purposes, and previous to entertaining any application, the Minister of the Interior shall satisfy himself of the good faith and ability of the applicant to carry out the undertaking involved in such application.

17. From time to time, as may be deemed expedient, leases of such Townships, or portions of Townships, as may be available for grazing purposes, shall be put up at auction at an upset price to be fixed by the Minister of the Interior, and sold to the highest bidder—the premium for such leases to be paid in cash at the time of the sale.

18. Such leases shall be for a period of twenty-one years, and in accordance otherwise with the provisions of section eight of the Amendment to the Dominion Lands Act passed at the last Session of Parliament, hereinbefore mentioned.

19. In all cases the area included in a lease shall be in proportion to the quantity of the live stock kept thereon, at the rate of ten acres of land to one head of stock; and the failure in any case of the lessee to place the requisite stock upon the land within three years from the granting of the lease, or in subsequently maintaining the proper ratio of stock to the area of the leasehold, shall justify the Governor in Council in cancelling such lease, or in diminishing proportionately the area contained therein.

20. On placing the required proportion of stock within the limits of the leasehold, the lessee shall have the privilege of purchasing, and receiving a patent for, a quantity of land covered by such lesse, on which to construct the buildings necessary in connection therewith, not to exceed five per cent. of the area of the leasehold, which latter shall in no single case exceed 100,000 acres.

21. The rental for a leasehold shall in all cases be at the rate of $10 per annum for each thousand acres included therein, and the price of the land which may be purchased for the cattle station referred to in the next preceding paragraph, shall be $1.25 per acre, payable in cash.

Payments for Lands.

22. Payments for public lands and also for pre-emptions made in cash, or in scrip, or in police or military bounty warrants, at the option of the purchaser.

23. The above provisions shall not apply to lands valuable for town plots, or to coal or other mineral lands, or to stone or marble quarries, or to lands having water power thereon; and further shall not, of course, affect Sections 11 and 29 in each Township, which are public school lands, or sections 8 and 26, which are Hudson's Bay Company's lands.

J. S. DENNIS,
Deputy Minister of the Interior.

LINDSAY RUSSELL,
Surveyor-General.

3L17

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CLUTHE'S PATENT SPIRAL TRUSS all attachments improved. No more buckles, all on solid brass casting. Book on rupture and human frame free. Send address in full post card. Best true information about rupture and deformities. CHAS. CLUTHE, Surgical Machinist, 118½ King Street west, Toronto. 12L13

Travelling Agent.

MR. A. L. W. BEGG has been appointed agent for the CANADA LUMBERMAN, and is authorized to collect subscriptions and grant receipts therefor and to make contracts for advertisements appearing in its columns.

The Canada Lumberman

DEVOTED TO THE LUMBER AND TIMBER INTERESTS OF THE DOMINION.

PUBLISHED SEMI-MONTHLY BY

TOKER & Co. PETERBOROUGH.

Terms of Subscription:

One copy, one year, in advance	$2 00
One copy, six months, in advance	1 00

Advertising Rates:

Per line, for one year	$0 90
Per line, for six months	50
Per line, for three months	30
Per line, for first insertion	10
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Special rates will be made for page, half page and column advertisements.

Advertisements intended for insertion in any particular issue should reach the office of publication at least three clear days before the day of publication, to insure insertion.

All communications, orders and remittances should be addressed and made payable to TOKER & Co., Peterborough, Ont.

Communications intended for insertion in the CANADA LUMBERMAN, must be accompanied by the name of the writer, not necessarily for publication, but as a guarantee of good faith. Communications to insure insertion (if accepted) in the following number, should be in the hands of the publishers a week before the date of the next issue.

PETERBOROUGH, Ont. AUGUST 1, 1881.

NOT ALL PROFIT.

THOSE not engaged directly in getting out and manufacturing lumber are inclined to think the lumbermen of Canada are having a big time just now. But on the present occasion, as on so many others, "all is not gold that glistens." Were the enhanced prices now being obtained, as compared with a few years ago, all profit, they would indeed be having a good time. But such is very far from being the case. If the selling price of lumber has advanced, the cost of getting it out and manufacturing it has also sensibly advanced, and, as a consequence, the "margin" between the two is much less than many would suppose. Of course the lucky men who carried over considerable stocks from last year are doing well, but, upon the logs taken out last winter, and now being got to the mills and manufactured, every item of expenditure has increased in quite as great, if not greater ratio than the price of lumber. This being the case, it will be obvious that any set back in prices within the next twelve months might prove disastrous to those who seem to be on the high road to fortune. While we do not think there is any immediate danger of such a set back, a word of caution certainly can do no harm—either to employer or employed. With regard to those employed in the trade it may not be out of place for us to remind those of them, who see the *Lumberman*, that while they are entitled to share in the existing "boom," their employers have to encounter many slips twixt the cup and the lip between the time the tree is felled and got to market, and unless he keeps a decent margain ahead of him, he is very apt to come out at the small end of the horn by the time the seasons operations are wound up. During a period of high prices, like the present, such a margain is particularly necessary. Granting that the expenses in getting out the stock now on hand is moderate as compared with ruling prices, these prices cannot be realized for months to come, and in a great many cases until next year, so that the employer has to consider, not so much the present value of lumber, as what it may be twelve months hence, and the higher the price now, the greater the room for a fall before he can get his present stock off his hands. Caution and moderation should therefore be the motto of the employer and employed.

FORESTRY.

THE Council of the Agricultural and Arts Association offer special prizes this year for essays on "Forestry, including best methods of preserving our present forests, and the varieties of trees best suited for forest planting." These essays are not to exceed twenty pages of foolscap in length, and are to be sent into the Secretary of the Council, (Henry Wade, Toronto,) not later than the 15th August, so as to be examined by a committee, the prizes awarded and the prize essays read at a public meeting to be held during the Provincial Exhibition, on Wednesday evening the 21st of September. The prize for the best essay is $30, for the second best, $20.

TORONTO.

From Our Own Correspondent.

TORONTO, July 25.—From the contents of my last letter you will doubtless expect to hear that lumber shipments at this port are now fairly booming; but, alas! for human hopes, this world of ours is full of disappointment, and in this instance the fond expectations of the lumbermen has not been realized; in fact, matters are worse to-day than at any period of the season's work. True, the gauge of the road has been changed, and it seems difficult to find out what is the exact trouble at present. Some assert that the company have not engine power sufficient to do the work required, but this the company deny positively; others affirm that it is the want of rolling stock, a large quantity of flats being still unchanged from the broad gauge to the narrow. My impression is that the latter is the main cause of the present delay, and much difficulty is said to have been experienced through the heating of the boxes on cars that have been lately changed to the present gauge. So much trouble has this caused the company that trains have frequently had to be divided, and a portion left at some station a considerable distance north of this city, and shippers are now declaring that patience with them has ceased to be a virtue. Inspectors working at different points of the road have in many cases had to return home, one of whom I heard soberly declare that he had travelled the entire length of the road in search of empty flats, and failed to find one on any part of the line. One thing is certain, unless the present state of things is soon changed, this season's business will be a losing game. The retailers are grumbling furiously because shippers get a preference in their application for cars, and there is no doubt but that the railroad companies favor shippers at the expense of those doing a local trade. So much so has this been the case that many of the yards are entirely out of desirable portions of their usual stock, and this just at the time when building is unusually brisk is certainly vexatious. Let us hope, however, that another week or two will so improve prospects, as to at least partially remove the state of ill-feeling existing in the minds of those having business relations with the company. There is no doubt, as remarked in my last letter, that the railroad company made a serious blunder in changing the gauge of the road just at the commencement of the busy season, but they are now striving to remedy their mistake as far as possible by using strong efforts to get all the rolling stock changed as quickly as circumstances will allow, so as to meet the demands made upon them for cars as far as lies in their power. Local dealers now shipping over the Midland and G. T. R. to this place find no difficulty in disposing of all the lumber they bring in, and this will continue to be the case while the dearth for empty flats continues on the other road. There are several firms doing a good carload trade on the local market, noticeable among whom is the firm of J. & F. N. Tennant, formerly of Barrie. They have the reputation of being liberal buyers and close sellers, and their success in consequence is doubtless assured, and being men who look sharply after their business, they will deserve all the success they may obtain. I will in future letters mention the names of other enterprising firms doing wholesale local and shipping trade. In my last letter I promised to give you the total quantity of walnut sold and worked up in this city, and after considerable trouble in collecting figures, I find that there is sold and consumed in this market, in round numbers, something over 2,000,000 feet of walnut, which may be put down at an average price of $80 per M., thus making a total investment in this class of wood alone of $160,000.00, and the trade in this and other fancy woods is rapidly increasing. How long the forests of this continent will stand the yearly drain now being made in the above and other woods is hard to predict, but unless an extensive system of replanting is soon entered upon, the end may be much nearer than many people imagine.

Freights to Oswego remain about the same, with some tendency on the part of vessel owners to accept slightly lower rates on lumber, as there are always a large number of vessels seeking lumber freights that are unfit for the grain carrying trade. Shingles have at last taken a leap upwards, and are now selling from the yards at $2.75 per M. for XXX, and if the present scarcity continues a still higher price will have to be demanded. Dealers have at last been convinced of the folly of selling by retail at wholesale purchasing prices, and it would have been money in their pockets had they consented to have raised their prices earlier in the season. The same quantity, or nearly so, would have been disposed of, and some remuneration for their labor; and I would again remind retailers that just so long as they consent to remain in an isolated position, without any recognized organization amongst themselves, just so long will this haphazard mode of doing business continue, and I venture to say, without fear of contradiction, that there is no other class of dealers on the face of the earth to-day who would so long allow this state of affairs to continue.

LATEST QUEBEC NEWS.

SHIPMENTS OF LUMBER—RECENT TRANSACTIONS. PRICES CURRENT.—MINING NOTES.

From Our Own Correspondent.

QUEBEC, July 25.—So far as the shipment of lumber goes, this is about the dullest period of the summer. The early arrivals, generally spoken of as the spring fleet, are mostly on their return voyage, and the vessels now in port are not, generally speaking, taking in very large quantities of timber or deals. It is too early yet to speak of the prospects for the fall fleet, but no matter how large may be the sailing of timber vessels for Quebec this fall, cargoes will be found for all, providing present expectations are realized, and that the heavy transactions of the past few weeks are repeated a few times from now to the close of navigation.

The very large yield of deals from the mills of Messrs. Baptist & Co., of Three Rivers, have been lately purchased by Messrs. R. R. Dobell & Co. of this city. The prices paid have not yet transpired.

The most accurate idea that can be given of the prices current of deals may be formed from the figures paid in the latest transactions, the principal of which are given elsewhere.

OAK.

Only two sales of oak worth reporting have been recently made in this market. One dram of Ohio oak, 76 feet average, has changed hands at 49 cents, and it is understood to-day that another sale has been made of 100,000 feet, though the prices are not made public.

In the absence of sales to report, the following market prices may be of interest:—American pipe staves, fair specification, $320 per standard mill; West India white oak, $72 per standard mill; West India red oak, $64.

MINING NOTES.

Scarcely a week passes but the discovery of new signs of mineral wealth in this Province attracts the attention of scientific men and mining experts. Only a few days since there was found quite close to the line of the Lake St. John R.R., about 15 miles from this city, beautiful specimens of white plaster (sulphate of lime.)

Mining operations in the gold district of Beauce have been materially interrupted of late by want of water, occasioned by the late drought. The streams are now well replenished, however, by late rains.

MESSRS. R. & G. STRICKLAND are now shipping over the Midland and Grand Junction Railways, from Lakefield to Belleville, a raft of 150,000 feet of timber, which is said to be the finest ever sent from these parts.

A NEW LUMBER COMPANY.

THE MIDLAND AND NORTH SHORE LUMBERING AND GENERAL MANUFACTURING CO., (LIMITED).

The Lindsay *Post* says:—A meeting of a number of gentlemen interested in the new lumbering and manufacturing company, to be formed with headquarters at Lindsay, was held at the Benson House on Monday, and satisfactory progress made in the project. Among those present were Hon. T. N. Gibbs, Oshawa; R. C. Smith, Port Hope; A. P. Poussette, D. Ulyott, Peterboro; J. D. Smith, Fenelon Falls, and J. A. Barron and Needler & Sadler, Lindsay. The capital stock is to be $750,000, in shares of $100 each, and nearly one-half of this amount has been taken and paid already. From the notice in the *Ontario Gazette* we gather that the company is to be called "The Midland and North Shore Lumbering and General Manufacturing Co., Limited;" and that the objects for which incorporation is sought are the acquisition of pine timber limits and lands in the Province of Ontario by purchase or otherwise; the conducting of the business of lumberers and timber merchants, including the purchase, preparation, manufacture, trasport and sale of timber, lumber, shingles, lath and pickets, broom handles, matches, pulp, doors, sashes and blinds, pails tubs and wooden ware, furniture, agricultura, implements, mouldings, boxes, railroad and other cars, ties, cordwood, fence rails and posts, telegraph poles, staves and barrels, axe handles, wagons, carts and lumber dryers; the building of vessels, ships and boats, docks and piers; the planing and dressing of lumber, and the erection and purchase of mill privileges, water powers, mills, saw mills, buildings, machinery, coves, booms, booming grounds, utensils, horses, cattle, boats, vessels, and many other things. The operations of the company are to be carried on within the Province of Ontario, and the town of Lindsay is to be the chief place of business. The applicants and directors are Messrs. Dalton Ulyott, G. A. Cox, A. P. Poussette, Hon. T.N. Gibbs, Jas. H. Beatty of Thorold, R. C. Smith, Malcom McDougall of Parry Harbor, and J. A. Barron of Lindsay.

It will be seen that car-building is one of the lines of industry to which the company proposes to have power to give its attention, and that being the case, it may be well that the superior advantages of Lindsay for such industry should be brought before them. The committee on manufactures might take some action in the premises.

LONGFORD MILLS.

From Our Own Correspondent.

Business at this point is at present booming. The logs of the Longford Lumber Company have all arrived safely in Lake St. John at the mills. The Dominion Bank logs reported stuck will be very near all got out of Black River. The two mills are running to their full capacity cutting up to the average of other years. Some difficulty was experienced for some time past in getting lumber forward to Toronto, owing to the scarcity of rolling stock on the Northern Railway during the time of the change of gauge. At present a full train a day leaves the yards loaded with lumber for Albany and other points. One hundred and twenty men are employed at the mills and yards, and up to the present no difficulty has been experienced in getting what men were necessary to keep this large staff replenished, owing largely to the cordial good feeling existing always there between employers and employees.

The burners erected here by Mr. Wm. Hamilton, of Peterboro, are an immense success, devouring the entire refuse of both mills like chaff and with perfect safety from fire. Sales of lumber are going on satisfactorily. Prices have advanced steadily. The large quantity of cull lumber held here was disposed of recently to an American firm at fair prices.

At the annual meeting of the Longford Lumber Company held recently a resolution of condolence with the families of the late Mr. John Thomson and Mr. T.W. Buck were unanimously passed, owing to the death of these two prominent gentlemen of the Board of Directors.

The circulation of the CANADA LUMBERMAN is over 2,000 copies. Advertisers should note this

OTTAWA.

From Our Own Correspondent.

OTTAWA, July 25.—The lumber market is firm, sales being steady. Business this year has been somewhat better than last. During the quarter ending June 30th the value of lumber and shingles exported to the States from this section was $587,514.75, as against $509,863,05 for the same three months of 1880. The shipments for the March quarter amounted to $31,430.47, making a total value of $618,945.22 for the half-year. Shipments of this season's cut of lumber have begun to be made.

QUOTATIONS.

There is virtually no change in prices during the past two weeks. Ten-inch stocks are quoted at from $12 to $14 per thousand; 12-inch stocks at from $16 to $19; sidings at from $20 to $30 per M.; shipping culls at $10 and $11 a thousand. Last sell at from 85 to 90 cents a thousand by the barge load, and 90 cents to $1 in smaller quantities.

SQUARE TIMBER.

So far this season 50 rafts, averaging 90 cribs each, have passed through the Chaudiere slides at this point. There are about twenty or twenty-five rafts yet to come down. It is expected that not more than half of these will be got through, owing to the lowness of the water in the Ottawa, which is now slightly more than three feet lower than it was at this time last year. A jam of saw-logs at Roche Captaine kept back several rafts a few days. McLachlin Bros., Octave Lalour, David Moore, and Allan Grant are among those having rafts in difficult places. The timber got out by the Scotch-Canadian Co. is being brought down by rail—twelve hundred carloads, through from Mackey's station to Quebec, over the the Canada Central and Occidental Railways, 475 miles, at a cost, it is said, of five cents per foot. The quantity of square timber taken out last winter was about ten million feet.

THE DRIVES.

The drive on the Upper Ottawa is progressing favorably, but it will be late in the season before the logs will all be got down.

The final sweep on the Gatineau River is being made, under the superintendence of ex-Ald. Bingham, who has the contract. The following quantities of logs have already been brought down this season :—

Gilmour & Co., Ottawa Mills	108,000
" " Chelsea Mills	112,000
G. B. Hall & Co	165,000
W. C. Edwards	41,000
Hamilton Bros	33,500
James MacLaren & Co	14,000
John Roach	8,300

In addition to the above 5,000 pieces of square and flatted timber were brought down for MacLaren & Co., and 48,000 railroad ties for Hebron Harris. The quantity of logs yet to come down the Gatineau is about 150,000, so that the total number of logs taken out on the river named this season will reach nearly 632,000.

EDGINGS.

Messrs. Perley & Pattee have arranged for the lighting of their mill by electricity.

Capt. Young has been unfortunate this year, having to shut down on an average a couple of days a week for want of logs, which have been delayed in coming down.

Considerable quantities of lumber is being shipped by rail—St. L. & O. Railway—to Ogdensburg.

A number of Canadian barges are laid up for the present, for lack of freight, shipping being a little dull just now.

McLachlin Bros.' new steam mill at Arnprior will be 156×60, with a 32×40 wing, and a 44×60 boiler house. The engine will be of 500 horse-power.

Rates of lumber freights are as follows :—To Montreal, $1.10@$1.25; to Quebec, Burlington and Whitehall, $2 per M.; to Albany, $3, and to New York, $3.25. The rate to Whitehall was $2.25 a week ago, but it dropped a quarter.

ZOPESA.—A healthy man never thinks of his stomach. The dyspeptic thinks of nothing else. Indigestion is a constant reminder. The wise man who finds himself suffering will spend a few cents for a bottle of *Zopesa*, from Brazil, the new and remarkable compound for clensing and toning the system, for assisting the Digestive apparatus and the Liver to properly perform their duties in assimilating food. Get a 10 cent sample of *Zopesa*, the new remedy, of your druggist. A few doses will surprise you.

ST. JOHN, N. B.

From Our Own Correspondent.

DEALS AND SHIPS.—Our port continues to be well supplied with tonnage, and the shipments have been large, in consequence of which our stock of deals, not in the hands of shippers, is very small indeed. Country sawn deals, though coming in rather freely, are absorbed as fast as they arrive; they are selling at about $8.50 per thousand, Sup. feet. The small stock of deals of city manufacture are held for considerable higher prices, which are likely to be realized before the end of the season.

FREIGHTS.—As a natural consequence of what is stated above, the freight market continues greatly depressed. The *Hildyard*, 1,200 tons, was chartered for Liverpool last week at 51/3, which, considering the lateness of the season, may be reasonably considered as about the lowest point. It is not very probable that rates will be lower this season.

VESSELS IN PORT.—The following is a list of the square-rigged vessels in port, with their tonnage and destination :—

William, 198, Marseilles.
Nylghan, 1254, Liverpool.
L. H. D'Veber, 615, Londonderry.
John Murphy, 1479, Liverpool.
Loining, 847, St. Nazaire.
Moss Glenn, 893, Dublin.
Varbierg, 401, United Kingdom.
Astracana, 1193, Liverpool.
Arklow, 748, ——
Wacissa, 809, Liverpool.
Fidelia, 450, W. C. England.
Nellie Moody, 746, ——
Navigator, 530, Marseilles.
Chas. B. Kenny, 1128, Adelaide, orders.
Jennie Parker, 998, Gibralter, orders.
Paramatta, 925, Dublin.
Solid, 493, Plymouth.
Gem, 281, Cork Quay.
Emily Raymond, 290, Wexford.
Regina, 1212, ——
China, 420, United Kingdom.
St. Olaves, 571, ——
Eos, 390, Bordeax.
Still Water, 1090, Newport.
Priscilla, 766, Melbourne.
Matilda, 675, Marseilles.
Colorado, 682, Dublin.
Finn, 425, France.
John Rutherford, 983, Dublin.
Stilla, 445, ——
Emily Lowther, 762, ——
Henry, 1095, Liverpool.
Hildyard, 1200, Liverpool.
Edna M. Gregory, 386, ——
Golden Sea, 1418, London.
Susan L. Campbell, 727, ——
Hattie M., 597, Dublin.
Alfred, 349, ——
Rolf, 922, ——
Torryburn, 448, discharging.
B. F. Nash, 412, ——

SHIPMENTS.—The shipments of deals and other sawn lumber are as follows :—

For Europe	25,587,000	Sup. feet.
" United States	4,598,090	" "
" West Indies	155,000	" "
" Canary Islands	209,000	" "

St. John, N.B., July 19, 1881.

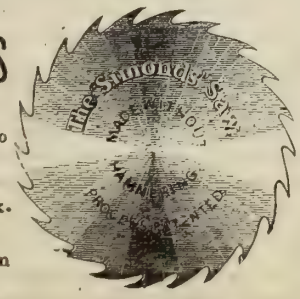
Those who write for fame, for honor or emolument, cannot do better than use pens made by the Esterbrook Steel Pen Company. Samples furnished on application by addressing their office, 26 John Street, New York.

THOUSANDS OF CHILDREN are lost annually from cholera infantum, diarrhœa, and the summer complaints, whose lives might be preserved by using Extract of Wild Strawberry. Physicians recommend and use it constantly. It is a remedy well known, and more highly valued the longer known. It is for sale at all drug stores, and is within the reach of every one. See advertisement in another column.

THE SIMONDS SAWS

Are Superior to all others.

More Work.
Better Work.
Less Power.
Unformity in Temper.



R. H. SMITH & Co., St. Catherines, Ont.,
Sole Manufacturers for the Dominion of Canada.
Send for Price List.
Our Hand Saws are like our Diamond and Hanlan Cross-Cut Saws, w43

UNEXCELLED.

CANADA TRUSS FACTORY
(ESTABLISHED 1856.)
F. GROSS,
Manufacturer of SURGICAL and ORTHOPŒDICAL INSTRUMENTS. ARTIFICIAL LIMBS made to order. INDIA RUBBER GOODS of every description. L19-1y
688 and 690 Craig Street, Montreal.

WANTED.
CHERRY, WHITE ASH,
AND
WALNUT LUMBER.
Quote Price delivered, and Carefully Describe:—Quality, Widths, Length, Thickness, and how long Sawed.
ROBERT C. LOWRY,
Wholesale Lumber,
12L19 55 Pine Street, New York.

Daily Line to Rochester.

THE STEAMER "NORSEMAN."
(R. CRAWFORD, MASTER.)
Will make her regular trips on this route commencing on Wednesday, the 20th of April, 1881, leaving Cobourg every morning at 7.30 and Port Hope at 9 o'clock, on arrival of Grand Trunk Railway trains from the East and West, connecting at Rochester with the New York Central, Northern Central, and Erie Railways, and the Lake Ontario Division of the Rome, Watertown and Ogdensburg Railway for all points east, west and south.
RETURNING,—Will leave Charlotte (Port of Rochester) daily at 9 o'clock p.m., except Saturdays, when she will leave at 3 p.m. for Port Hope direct.
Dealers in stock will find this the cheapest and most expeditious route to Oswego, Boston, Albany, New York, etc., etc. For further information apply to
R. CRAWFORD,
or C. F. GILDERSLEEVE. Port Hope.
Kingston. w17

GRATEFUL—COMFORTING.
EPPS'S COCOA
BREAKFAST.
"By a thorough knowledge of the natural laws which govern the operations of digestion and nutrition, and by a careful application of the fine properties of well-selected Cocoa, Mr. Epps has provided our breakfast tables with a delicately flavored beverage which may save us many heavy doctors' bills. It is by the judicious use of such articles of diet that a constitution may be gradually built up until strong enough to resist every tendency to disease. Hundreds of subtle maladies are floating around us ready to attack wherever there is a weak point. We may escape many a fatal shaft by keeping ourselves well fortified with pure blood and a properly nourished frame."—*Civil Service Gazette.*
Made simply with boiling water or milk. Sold in packets and tins only (½-lb. and lb.) labelled
JAMES EPPS & CO., Homœopathic Chemists,
London, England. L19-1y

HOP BITTERS.
(A Medicine, not a Drink,)
CONTAINS
HOPS, BUCHU, MANDRAKE, DANDELION.
AND THE PUREST AND BEST MEDICAL QUALITIES OF ALL OTHER BITTERS.
THEY CURE
All Diseases of the Stomach, Bowels, Blood, Liver, Kidneys, and Urinary Organs, Nervousness, Sleeplessness and especially Female Complaints.
$1,000 IN GOLD.
Will be paid for a case they will not cure or help, or for anything impure or injurious found in them.
Ask your druggist for Hop Bitters and try them before you sleep. Take no Other.
D. I. C. is an absolute and irresistible cure for Drunkeness, use of opium, tobacco and narcotics.
SEND FOR CIRCULAR.
All above sold by druggists.
Hop Bitters Mfg. Co., Rochester, N. Y., & Toronto, Ont.

SALE BY TENDER
OF EXTENSIVE STEAM
Saw-Milling Property
AT
Parry Harbour, Georgian Bay, and Valuable Timber Limits in the Parry Sound District.
The SAW-MILL is complete in its appointment, and has a cutting capacity of 90,000 to 100,000 feet per day of twelve hours.
The LIMITS cover an area of 229 square miles in the Townships of Monteith, Humphrey, Christie, Ferguson, Hagerman, McKellar, Spence, and Shawanaga, besides the purchased rights to cut the timber from numerous lots in the same Townships, and contain a large quantity of standing pine.
The whole establishment is in complete condition and active operation, and is excellently situated for the manufacture, sale and shipment of timber
Tenders for the whole property, including plant, will be received until the 20th August next, addressed to the General Manager, Ontario Bank, Toronto, by whom terms of payment and any further information will be furnished on application. No tender will be accepted unless satisfactory to the vendors. 4L17

IRWIN & BOYD
Commission Lumber Dealers,
FORWARDERS,
Shipping and General Agents
PORT HOPE.

THE GROWTH AND DECLINE OF LUMBER

ECONOMICALLY AND COMMERCIALLY CONSIDERED —THE TRADE AS IT IS TO-DAY,

We find the following in the Brooklyn *Eagle*:

Four years ago the then Secretary of the Interior reported that from all the information he could obtain there was not enough timber in the whole of the States to last thirty years. In 1878 a timber journal estimated the supply to last twenty years. Yet, notwithstanding these assertions, doubtless based upon accurate figures, merchantable lumber to-day is cheaper than it was ten years ago. Proof of this fact will be given further on. How to reconcile this apparent discrepancy is one of the purposes of this article. Statistics, as a rule, are not interesting to the general reader, and they will be avoided as much as possible, except were absolutely required for necessary illustration. The primary causes of the depletion of our forests (apart from the necessary clearing for homesteads and corn fields) are waste and carelessness. On taking up a farm the first thought and act of the farmer was to cut down every tree growing on it; and he never seemed quite happy until the last one had fallen. His governing idea was doubtless to make every square inch of his land productive. The result of late years has shown him how great was his mistake. With the clearing away of the timber he has pretty well cleared away the climate also, and he has succeeded in reducing the number of rainy days to the detriment of his crops. Possibly some one will reply "but our grain products of late years have largely increased. How do you account for that?" True. This, however, is due to increased emigration and increased acreage in virgin soil, but it does not apply to the older settled States, as New York, Massachusetts, Indiana, and many others. The trouble has been that the boundless forests of the North-west promised to endure forever, and their seemed no incentive to any care of the original growth of timber. The fine old forests of the South have been more shamefully ill-used than those of the North. The negro has so little regard for trees that he never fails to cut down the young saplings, because they yield firewood with less trouble than other trees.

To appreciate more fully the rapid exhaustion that is now going on, it should be stated that it was quite usual, thirteen years ago, for a square timber to average in length from seventy to seventy-five cubic feet per log, whereas, at the present day, the average of the season's log crop does not average beyond fifty-five cubic feet—an average decrease of say seventeen feet in thirty years. Against this place the fact it requires something near 150 years for a pine tree to attain maturity, and a fair idea will be formed of the seriousness of the situation.

The initial causes of this rapid decline, it has been stated, are waste and carelessness. With regard to the waste, how does it arise? Take pine and hemlock as illustrations. In cutting out a square stick of pine lumber, twenty-five per cent. is loss. A long train of dry chips marks the route from the spot where the tree is felled to the place of transportation on the wagon on the rough road. These trains, for they are almost as inflammable as gunpowder, easily catch fire, and when once started thousands of acres are in danger of destruction. Again, only one pine tree in every five cut down is sound, for mercantile purposes. Consequently, four are left to rot in the woods, and thus increase the danger. Instead of utilizing the healthy parts of the stick, by sawing it up, thousands of dollars literally rot in the ground, annually, through this want of foresight. But would it pay to transport these unsound trees to a saw mill? Undoubtedly it would, for while the neglected stick may be quite useless as square timber, it would be useful for mouldings, laths and various other purposes for which pine is used. In the future, when pine becomes much scarcer than it is now, the collection of felled trees that have hitherto been supposed to be useless, will become a very valuable business. The same remarks also apply to hemlock. Thousands of these trees are stripped of their bark, year by year, and are left to share the same fate as the pine.

As to carelessness: Forest fires mainly proceed from the want of precautions on the part of lumbermen and hunters, who fail to see that their camp fires are properly extinguished. A sudden breeze, a spark falls on a dead leaf, and, behold, a conflagration. In several instances fires have been known to originate from a passing locomotive, the smokestack of which has not been provided with a safeguard. But very few cases have been reported of extensive forest fires where engines have been furnished with this necessary article. Thus we see the results of waste and carelessness. It is a singular fact that very few fires are caused by lightning, which is almost invariably accompanied by heavy rain storms. Mr. Stewart Thayne, an English journalist, who has given the subject much attention, said in his evidence before the Select Standing Committee of the Canadian House of Commons, in April, 1878 (see report, p. 123):—"I have never been able to trace fires to lightning. I have been able to trace them, however, to almost every other cause." At a meeting of the Liverpool Board of Trade last fall the same gentleman remarked that it was within the bounds of moderation to say that within the past ten years the supp'y of timber that had been recklessly and unnecessarily cut down would, at the average rate of legitimate consumption, have lasted one hundred years.

THE REMEDY.

The remedy is simple enough and suggestive. In Europe every forest of any extent has its regular staff of officers and rangers, whose special duty it is to watch over its safety. Open spaces and broad belts of cleared land are kept up on purpose to keep fire from spreading. The ground is not incumbered with such a quantity of *debris* as is usual in the United States and Canada. There the people employed in the forests are interested in their preservation, and stringent official regulations control all others.

THE CLIMATE.

The subject of forest depletion is not alone important in its relation to the waste and consumption of timber. In its climate aspect it has great significance. The reports issued by the United States Government prove that a most notable change has taken place in the climate of the New England States, in New York State, New Jersey, and also in the Southern States.

In this State, where the error of a total clearing away was first observed, the replanting of forest trees has been attended with very good results. In these sections the rainfall has largely increased, and the rainfall is more evenly distributed throughout the season than in districts almost completely denuded of timber. On the prairies of Kansas and Nebraska, where a good natural growth of wood is lacking, the results obtained from the planting of forest trees are even more strikingly illustrated. The planted forest serves as a good wind break, and the influence of the wood's growth is seen in lessened periods of drouth and an increase in crops. What is needed, however, is accurate information about the branches of trees adapted to particular soils, and to provide this the Government has set apart an appropriation, and placed in charge of the work Mr. Charles Sargent, professor of aboriculture in Harvard College. In San Francisco the cultivation of the almond tree has been attended with great success, as also that of the eucalyptus, or blue gum tree, indigenous to Australia, and admirably adapted for firewood. In the vicinity of San Josef there were planted last year 350 acres in almond trees, and the growers claim that it is the best paying industry in that part of the country—the profits being larger than are obtained from any other enterprise. In Massachusetts the Legislature has given large tracts for forest culture, in addition to liberal bonuses for the best variety of trees grown within a certain period. This part of the subject is especially interesting, but sufficient has been said to show that the public attention is being aroused to the absolute importance of remedying a condition of affairs which is becoming more serious every year. To ameliorate a climate presenting violent contrasts of temperature, there is only one method—that of planting wherever the nature of the soil will permit, and forming settlements under the shelter of these plantations.

THE LUMBER TRADE TO-DAY.

It was stated at the outset of this paper that merchantable timber is cheaper now than it was ten years ago. In an interview with a well known lumber merchant of New York, who is thoroughly posted on the subject, he said:

"Yes, lumber is much cheaper now than ten years since. The white pine was worth $75 per 1,000; to-day it is quoted at $55. Pitch pine, ten years ago, was $45; now it is worth $32.50. Hard woods, with the exception of black walnut, are also cheaper. Ash is now worth $50 per 1,000; ten years ago it was $75. It is the same with oak. Spruce then realized from $25 to $30. To-day I can buy it for from $17 to $20."

"How about black walnut?"

"Black walnut is the same price to-day as it was ten years ago $120 per 1,000, jobbing price). But four years since the price of black walnut that now sells at $120 was $90. The reason is that we can see the end of it. It is now brought from the Missouri River to Indiana to be sawn up. Ten years ago it was growing at Indiana's own door."

"But how do you account for the cheapness in other woods, especially pine?"

"Over production. And yet the building trade was never more brisk and exports were seldom so large as now. But you must remember that the over production of lumber is the natural outcome of good times, and growers will soon see the mistake they are making by not saving their timber till they can get more for it."

"What will take the place of back walnut?"

"Mahogany from Mexico, which sells at from sixteen to twenty cents a foot."

"Does the export of square timber continue as large as formerly?"

"Well, I am scarcely prepared to say, but I should think not, because we are now manufacturing a class of goods that formerly were made from the log."

"What class may I ask?"

"We are sending, for instance, house trimmings to Scotland, as mouldings, sashes, etc. There is quite a trade springing up in portable houses in Chicago that are shipped to the West Indies and Australia. Formerly these were made in Norway and Bavaria, right near the forests. But America is getting ahead of those places."

"Does the introduction of iron in buildings affect the timber interest?"

"Not much, as yet. I do not know but that it may eventually. In some large buildings that are going up iron beams, and even iron laths, are being extensively used, though whether they will stand the test of oxidation remains to be seen. These are used mostly in fire-proof buildings. The beams cost fifty cents more than wood beams."

"What is your impression about the scarcity of the lumber supply, taken as a whole?"

"The difference in the prices I have quoted does not carry out the supposition that the capacity of our forests is seriously declining, but there is no doubt much waste in the cutting of trees. But that waste is being rectified by new industries springing up by which much that was formerly thrown away is now utilized into mouldings, small panels, etc. If I were a proprietor of a pine forest I should decidedly keep my timber standing until it paid me to cut it. But I am not, being interested in buying all I can as cheaply as possible. You see it makes all the difference in the world how a man is situated. My impression is that at the present rate of consumption the people will only realize the full value of their timber when it is nearly all gone. But that is their business. My business is to sell."

Upon inquiry at the offices of a large sash manufacturer on Barclay street, who does an extensive export business, one of the partners said:

"We are shipping sashes and mouldings to London, and the trade is growing every year. In time it may turn out quite a large industry, as it is only of late years that the British have taken to buying such goods of American manufacture."

The over production theory certainly appears to be borne out in the following figures taken from the *Lumberman's Gazette*, for the week ending June 25, when the total shipments of lumber, lath and shingles from the Saginaw, with comparisons, were as follows:

	1880.	*1881.*
Lumber	211,650,362	164,839,269
Shingles	35,320,000	31,558,600
Lath	12,969,650	2,746,000

Again, in the comparative statement of stock on hand in the Chicago market on June 1, the figures are as follows:

	Lumber and Timber.		*Lumber and Timber*
1875	188,212,169	1879	225,738,000
1876	205,552,022	1880	262,467,000
1877	216,150,895	1881	270,317,946
1878	248,885,400		

In the one case it will be noted that while the sales from the Saginaw were much less on the date specified this year than in 1880, the accumulations of stock on the Chicago market on June 1 have been increasing until the present season. The reason of the sudden decline in 1881 is owing not to the fact that the over production has been sensibly reduced, but that prices have fallen so low that dealers can no longer afford to hold their stuff. Were it otherwise, it would be found that the shipments from the Saginaw would have increased in 1881, instead of being reduced. The same remark applies to other lumber centers. F. J. H.

Tree Cisterns.

It has long been known, through the reports of travellers, that in certain arid districts of Africa water is often found, even in the driest seasons, in hollow trunks of the great baobab tree (Adonsonia), and it was supposed that the provision of water was, so to say, natural; but it appears from the investigations of offices attached to surveying parties sent out by the Egyptian Government, that these reservoirs are neither formed nor filled by the accidents of nature. They are in reality prepared and filled by the inhabitants of the country, who carefully remove the decaped and spongy fibers from the interior of the trunk and laboriously transfer water to the cisterns thus made, bucketful by bucketful, from neighboring pools in which it collects in the rainy season. The importance of these reservoirs is illustrated by the fact that trunks containing 15,000 gallons of water are not uncommon in Kordofan, and that individual trunks have been measured which might store 33,000 gallons. The officers of the survey urge that it would be well for the Egyptian Government to organize a service for the protection and maintenance of these trees on the post roads and telegraph lines, so that couriers, linesmen, inspectors, etc., might always find a store of water. They cite one particular post-route, where in times past the people of the country had carefully filled the Adansonia tree during the season of rains, and thus ensured water during the dry seasons for much travel. But when troops were moved in that direction, the inhabitants took alarm, abandoned the vicinity, and neglected to fill the trees, so that the road became as good as impassable.

The Sand Blast.

Among the wonderful and useful inventions of the times is the common sand blast. Suppose you desire a piece of marble for a grave stone; you cover the stone with a sheet of wax no thicker than a wafer, then you cut in the wax the name, date, etc., leaving the marble exposed. Now pass it under the blast and the sand will cut it away. Remove the wax and you have the raised letters. Taking a piece of French plate-glass, say two by six feet, cover it with fine lace and pass it under the blast, and not a thread of the lace will be injured, but the sand will cut deep into the glass wherever it is not covered by the lace. Now remove the lace and you have a delicate and beautiful figure raised upon the glass. In this way beautiful figures of all kinds are cut in glass and at a small expense. The workmen can hold their hands under the blast without harm, even when it is rapidly cutting away the hardest glass, iron or stone, but they must look out for finger nails, for they will be whittled off right hastily. If they put on steel thimbles to protect the nails, it will do little good, for the sand will soon whittle them away, but if they wrap a piece of soft cotton around them they are safe. You will at once see the philosophy of it. The sand whittles away and destroys any hard substance—even glasses—but does not effect substances that are soft and yielding, like wax, cotton, or fine lace, or even the human hand.

TRAVELLERS AND TOURISTS should always be provided with Dr. Fowler's Extract of Wild Strawberry, the best remedy in the world for curing suffering brought on from eating unripe or sour fruits, bad milk, impure water, change of water and climate. The great remedy for all summer complaints.

OUR QUEBEC LETTER.

RENEWED ACTIVITY IN WHITE PINE—IMPORTANT TRANSACTIONS—RULING PRICES—CONTINUED STAGNATION IN HARDWOODS—MINING.

A period of almost unprecedented inactivity in the Quebec market, lasting over several months, has been broken, so far as white pine is concerned, by several important transactions within the past two weeks, which are worthy of special notice for two distinct reasons: the size of the sales and the prices obtained. Last week a large lot of lumber in the Bridgewater cove changed hands at an advance of a half cent per foot over the price agreed upon last year for another lot of the same quality lying right alongside of it.

Amongst the most noteworthy of recent sales are the following: 370,000 feet of Mr. McLaren's white pine, 60 feet average, 16 inches, has been sold at 25 cents, measured off.

Another lot of square, white pine, 53½ feet average, and containing 150,000 feet, has changed hands at 23½ to 24 cents.

Messrs. Sharples & Co. have recently purchased, through a broker from Jonathan Francis, 300,000 feet of square, white pine, 50 feet average, for 23 cents.

One of the cheapest lots sold this season was 50,000 feet waney white pine, small average, purchased by Messrs. R. R. Dobell & Co., at the following figures: 18 inches, 22½ cents; 18½ inches, 23½ cents; 19 inches, 24½ cents. This sale cannot be considered an indication of ruling prices. At present writing, holders are firm at the figures given for the previously mentioned transactions, and even higher prices may, in the opinion of some old dealers, be looked for. The prospects of a temporary settlement of Irish affairs appears to have given rise to increased confidence in the home market, which, thanks to the Atlantic cables, has found its almost instantaneous echo here.

HARD WOOD.

The stagnation in hard wood continues. Buyers seem to have formed a strong combination for the purpose of bringing down prices. Manufacturers and their Quebec agents, especially in oak, are holding purchasers to last year's bargains. There are no prospects of an immediate decline either in oak or staves. Holders can afford to wait. The Banks are not pressing for their money, having no particular demands for it, while their collateral is as good as gold, and cannot be again produced for its present cost.

MINING MATTERS.

There is undoubtedly a boom just now in gold mining matters in the now famous mines of Beauce. With the opening of this summer's season comes the news of the development of more mines, and the erection of many more extensive works for the mining, crushing and washing of the earth and quartz containing the precious metal. Mr. Ainsworth, agent of the Clarence Mining Company, has just erected immense works for the washing of the gold. The water is furnished from the Labranche River by an artificial canal 780 feet long. The quartz mill has been in operation since April last, and during the last three months has given every satisfaction. This company's works are upon what is known as lot 13, Gilbert River. Lot 14 is worked by Mr. Smart for the Beauce Mining and Milling Co., which has lately acquired a new engine for the quartz mills, and is engaged in opening up new pits. Mr. McRea is opening new pits this season on lot 15, which in 1867 yielded gold to the value of $17,000. Capt. Richards has commenced operations on lot 16, and on the "Branche," a new company at work, composed of Messrs. DeLery, Rodrigue, Chapman, and others.

The most important operators, however, in this district, both as regards the number of its employees and the extent of its works, are the Canada Gold Mining Co. (limited), represented here by its chairman, Mr. Gordon, of London, and by Mr. Walter Moodie, manager. The scene of its operation is upon lots No. 12 and 13. The works of this company are immense. More than one hundred men are now employed by it in the shafts, puddling machines and quartz mills. Upwards of eighty tons of earth and gravel are pulverized daily.

The Titanic Iron Works at Baie St. Paul will probably ere long be re-opened. A deposit of native silver, said to have been worked in a primitive manner under the French regime, has been discovered near the same place, partly by the aid of old records in the Crown Lands Department here. The fortunate holder has invited members of the Geological Survey to visit the site, and the readers of the LUMBERMAN shall be kept posted as to the result of their investigation.

STADACONA.

LUBRICANTS.

The *Scientific American* says, in answer to a number of correspondents, we publish the following:—

The desirable features of a good lubricant or unguent may be briefly stated thus: It should, first of all, reduce friction to a mixumin, should be perfectly neutral, and of uniform composition. It should not become gummy or otherwise altered by exposure to the air, should stand a high temperature without loss or decomposition, and a low temperature without soldifying or depositing solid matters. The question of cost and adaptability to the requirements of light or heavy bearings are also important considerations.

The finest lubricating oils in the market—those used for watch, clock, and similar delicate mechanism—are chiefly prepared from sperm oil by digesting it in trays, which clean lead shavings for a week or more. Solid stearate of lead is formed, and remains adhering to the metal, while the oil becomes more fluid and less liable to change or thicken on chilling.

Sperm oil is used for lubricating sewing machines and other light machinery. Some of the oils sold for that purpose contain cotton seed oil and kerosene, and others are composed largely of mineral, sperm, or signal oil—a heavy, purified distillate of petroleum.

Good heavy lubricating oil is made from heavy paraffine oil (a distillate of petroleum). Owing to "cracking" (decomposition of the vapors of the heavy distillate into lighter products), which takes place in the still, the crude oil contains a large per cent. of light offensive oils, too thin for lubricating purposes. In Merrill's process these are seperated by blowing superheated steam through the oils, heated just short of its boiling point in the still, the lighter oils being driven off, a neutral, nearly odorless, heavy oil, gravity 29° B. to 26° B., and boiling at about 575° Fahr., remaining. When mixed with good lard oil it makes an excellent and cheap lubricant.

Common heavy shop and engine oils are commonly variable mixtures of heavy petroleum or paraffine oils, lard oil, whale or fish, palm, cotton seed and resin oils. There are nearly as many of these composite oils in the market as there are dealers in such supplies. The following is one of them.

Petroleum	30	per cent.
Paraffine oil (crude)	20	"
Lard oil	20	"
Palm oil	9	"
Cotton seed oil	20	"
	99	

Solid or semi-solid unguents, such as mill and axle grease, etc., are prepared from a variety of substances.

PORT HOPE.

The following is a statement of lumber, etc., shipped from Port Hope for the periods named, as obtained from the books of the Harbour Master, viz.:—

LUMBER.

April	3,697,276	feet.
May	8,518,175	"
June	12,552,340	"
July, (to 11th inclusive)	4,414,015	"
Total	29,181,896	"

SHINGLES.

April		
May	10,250,000	
June	5,654,250	
July, (to 16th included)	1,856,500	
Total	17,760,750	

POSTS, ETC.

April	80	cords.
May	198	"
June	105	"
Total	383	"

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J. K. POST & CO.
LUMBER MERCHANTS
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OSWEGO, N. Y.
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Flexible Board Rules,
With Steel Head, either Cleveland or London make, at $1.75 Each.
GEORGE STETHEM,
PETERBOROUGH, L16

S. S. MUTTON & Co.,
Wholesale Lumber Dealers
TORONTO.
We have for Sale a large quantity of PINE, OAK, WHITEWOOD, ASH, CHESTNUT, CHERRY, BUTTERNUT, BASSWOOD, &c.
P.S.—Also on hand 120 M dry Oak 2 to 4 inches thick, will be sold cheap to close it out. 1yL16

JAMES HADDEN,
MANUFACTURER OF
Shingles and Dressed Stuff.
Foxmead, P. O., County of Simcoe, Ont.
Two Planers for sale or exchange for a Boiler. b26

P. FREYSENG & CO.
PROPRIETORS OF THE
Dominion Cork Cutting Co
BY IMPROVED MACHINERY.
All kinds of Corks in stock and Cut to Order. Corks & Life Preservers a Specialty. Corkwood, Tinfoil, Capsules, Wire, &c.
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WHOLESALE DEALER IN
White Pine, Basswood & Hardwood,
82 King Street East,
TORONTO, ONT.
1yL16

J. G. EDWARDS
HARDWARE MERCHANT,
LINDSAY.
BELTING, FILES, BABBIT METAL, CHAINS, ROPE, and LUMBERING SUPPLIES.
1y L17

SAMUEL WINDRIM,
MANUFACTURER OF
Agricultural Implements, Etc
MILLBROOK, ONTARIO.
HAVING DISPENSED WITH THE SERVICES OF AGENTS, I take this opportunity to bring to the notice of intending purchasers of Reaping Machines, that I have now on hand a quantity of the Celebrated
HANLAN REAPER,
which has NEVER BEEN BEATEN YET, and am prepared to allow the Agents commission—FIFTEEN PER CENT—on all purchases. L17tf

Penetanguishene Foundry
AND
MACHINE SHOP
CRAIG & CAMERON, Proprietors.
The undersigned beg to announce to the public that they are prepared to make all kinds of Mill and Steamboat Brass and Iron Castings.
All kinds of PLOW CASTINGS kept on hand. Plow Points and Landsides a specialty.
We have first-class machinery and are prepared to do all kinds of TURNING or PLANING on short notice.
We hope by strict attention to business and moderate charges, to merit a share of the public patronage.
All work guaranteed.
G. A. CRAIG.
C. CAMERON.
1yL17

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Grain Elevators & Steam Hoists,
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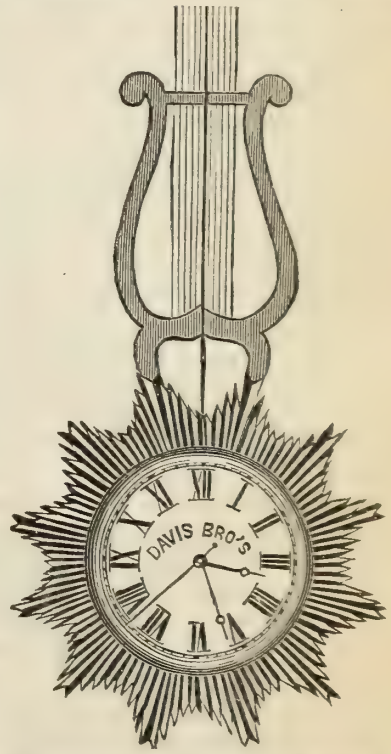
WATER WORKS, THE LATEST AND MOST IMPROVED, MADE TO ORDER.
LIGHT and HEAVY BRASS and IRON CASTINGS.
Plans and Specifications on application.
The Walkerville Foundry
AND
MACHINE WORKS.
Walkerville, Ont., June 1881. 12L16

SUN CLOCK



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Market Reports.

MONTREAL.

From Our Own Correspondent.

MONTREAL, July 11, 1881.—The exports of lumber as reported at the Custom House from the 1st July to date were as follows: To Fleetwood, 12,926 deals and 1,477 deal ends; to Gloster, 10,940 deals; to London, 28,803 deals; to Cork, 16,290 deals; to Liverpool, 16,886 deals; to Dover, 7,000 pieces; to Montivideo, 51,076 pieces; and to Penarth Road, 11,140 pieces. All the wholesale trade in shipping lumber at this port is done in Ottawa and elsewhere, so that it is impossible to give the wholesale prices for shipping lots, there being now bought in the Montreal market for that purpose, business here being almost entirely confined to the supply of the building trade, which is pretty brisk at present and the demand is very good, which, from all appearances, will continue so for some time to come, and the market is in consequence firm.

Pine, clear, ₱ M	30 00	@35 00
Pine, selects	16 00	@20 00
Pine, good box	12 00	@14 00
Pine, 10-in plank, 1st & 2nd quality, each	50	@ 60
Pine, 10-in. plank, culls each	26	@ 30
Pine boards, 10-in. shipping culls, each	13	@ 15
Pine, 10-in boards, 16 ft., ₱ M, 1st & 2nd	30 00	@35 00
Pine, 12-in. " " "	30 00	@35 00
Pine, 12-in. " 13 ft., "	30 00	@35 00
Pine, 1¼-in. siding, common	12 00	@14 00
Pine, 1-in. " "	12 00	@14 00
Spruce boards, each	09	@ 10
Spruce plank, 2-in., each	18	@ 20
Hemlock boards, each	8½	@ 9½
Ash, good, ₱ M	20 00	@25 00
Ash, second quality, ₱ M	16 00	@18 00
Oak, good, ₱ M	50 00	@65 00
Oak, second quality, ₱ M	45 00	@50 00
Basswood, ₱ M	20 00	@25 00
Maple, ₱ M	30 00	@40 00
Shingles, pine, XX, ₱ M	2 50	@ 2 50
Lath, pine, ₱ M	1 30	@ 1 30

Stocks of building lumber are pretty full, but not beyond the expected requirements of trade. In cordwood there is not much doing just now, but the market is firm with upward tendency. A large contract has been taken here for maple at $6.20 delivered, French measure, cord, which is six inches longer and three inches higher than that in use in Upper Canada.

July 25.—The shipments of lumber from the opening of navigation till the 18th inst. were as follows:—To Montevideo, 51,076 pieces and 685,753 ft.; Buenos Ayres, 739,076 pieces and 685,753 ft.; Buenos Ayres, 739,076 ft.; Penarth, 11,140 deals; Dover, 7,000 pieces; Liverpool, 16,886 deals; Cook, f. o., 16,290 deals; London, 28,805 deals and 210,000 ft.; Gloucester, 10,940 deals; Fleetwood, 12,926 deals; Cardiff, 11,815 deals; Grenock, 6,148 deals; Glasgow, 830,580 ft.; Monmouth, 40,000 ft.; Mist Hartlepool, 45,000 ft.; Queenstown, 10,000 ft.; Newcastle, 20,000 ft.; St. John's, Nfld., 406,883 drum staves and 55,000 ft.; Halifax, 313,753 ft.; Rotterdam, 58,000 ft.; Lisbon, 8,147 deals and 734 deal ends; Antwerp, 55,000 ft.

The rates of freight have been steady, to River Plate $15; to direct ports in Great Britain, 60s. to 62s. 6d.

The shipping trade has not been active during the past two weeks, only two cargoes having been shipped to the River Plate. The local demand has been good, and prices are well maintained, but without any change to note. Quotations unchanged.

TORONTO.

JULY 25.—The following are the quotations:

Mill cull boards and scantling	$ 9 00
Shpping cull boards, promiscous widths	12 00
" stocks	13 00
Scantling and joist, up to 16 ft	11 50
" " " 18 ft	12 00
" " " 20 ft	12 50
" " " 22 ft	13 00
" " " 24 ft	13 50
" " " 26 ft	14 50
" " " 28 ft	15 50
" " " 30 ft	17 00
" " " 32 ft	18 00
" " " 34 ft	20 00
" " " 36 ft	22 00
" " " 38 ft	25 00
" " " 40 to 44 ft	30 00
Cutting up planks to dry	18 00
" boards "	16 00
Sound dressing stocks	16 00
Picks Am. inspection	24 00
Three uppers, Am. inspection	32 00
1½-inch flooring, dressed	28 00
1½ " " rough	14 00
1½ " " dressed	24 00
1¼ " " undressed	14 00
1 " " dressed	18 00
1 " " undressed	14 00
⅜ Beaded Sheeting, dressed	18 00
Clapboarding, dressed	12 50
XXX sawn shingles, ₱ M	2 75
Sawn Lath	1 50

LONDON, ONT.

From Our Own Correspondent.

This market continues to be active, with no indications of a slackening off in work. Very loud and long are the complaints of a deficiency in our accommodation, which the railroad companies would do well to remedy. The G. W. R. and G. T. R. are, of course, the chief lines coming into this city, but they alone are not to blame; the auxillery lines are equally in fault.

This city has in the neighborhood of a dozen large lumber yards, besides planing and sash mills, and the demands on both are unprecedented; for the surrounding country, in this county and the neighboring counties of Oxford, Lambton, Elgin and Huron are outlets for the supply and production to an extent more or less.

The cedar block pavement which has just been completed in compliance with the terms of contract, gives entire satisfaction so far, and it is only a question of a very short time when it will be extended along Dundas street (one of our main thoroughfares) east of the city as far as Wellington street.

The Masonic Temple approaches completion, and it is without question one of the handsomest buildings west of Toronto. The *Free Press* of this city gave a representation of this magnificent structure in their issue a few weeks ago.

The calamity which befel this city on the 24th May last has resulted in the total colapse of the Navigation Company, and the two steamboats, *Forest City* and *Princess Louise* were offered at auction the other day, but there were no bidders; and I do not see what anybody could do with them, unless they were made into miniature training ships for a juvenile navy. They are now nearly high and dry, and will soon have to be proped up on their keels, or where the keels should be; and as there is no outlet they must either sail the Thames or become sad momentos of a woeful day.

Hard wood lumber does not meet with much sale in this city, and what there is in the market has no set price.

Shingles continue to be very scarce, and an advance on my last figures will be found in accompaning list.

Oak plank and scantling sells here at from $16 to $22.

My report of this city's lumber market at this date is firm and brisk, and below I give quotations:

Mill cull boards and scantling	$ 8 00
Shipping cull boards, promiscuous widths	10 00
" " 10 and 12 in. stocks	10 50
Common boards, promiscuous widths	13 00
Scantling and joist, up to 16 ft	14 00
" " " 18 ft	14 50
" " " 20 ft	15 50
" " " 22 ft	16 50
" " " 24 ft	18 00
Common stocks	14 00
Common 2 in. plank	13 00
Cutting up plank and boards	18 00
Sound dressing stocks	17 00
Clear and picks	28 00
Three uppers, Am. inspection	35 00
1½ inch dressed and matched flooring	21 50
1¼ " " " "	21 25
1 " " " "	21 00
XXX sawn shingles, ₱ M	3 00
Lath per 1000 feet	4 25

BOSTON.

The *Journal of Commerce* of the 23rd of July says:—There are no indications of a lull in the consumptive movement. The demand for dry stock is still without precedent at this season of the year. Cargoes stay hardly long enough to be noticed, they are so quickly caught up. Hardwoods are scarce and firm, with the exception of ash, which latter is a little "off" in price. Reports show the receipts of hardwoods to be light, and the anticipations of small future arrivals occasion a very firm feeling among holders. Advices from abroad show lunber to be very scarce, with high prices asked. The following are car load quotations:—

CANADA PINE.

Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
" " 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

THE REMEDY that has had the most remarkable success in the cure of diarrhœa, dyssentery, cholera morbus, and, indeed, every kind of summer complaint, brought on by eating improper food, such as raw vegetables, unripe or sour fruits, bad milk, impure water, etc.,—the remedy that is the most pleasant, rapid, reliable, and effectual, is Dr. Fowler's Extract of Wild Strawberry. It is the finest remedy for all summer complaints known. For sale by all dealers.

NEW YORK.

The *Real Estate Record* of July 23, says:—Very little in the way of positive complaint is to be heard on our wholesale market. Demand fluctuates a trifle, but sustains a good volume for the season, and there appears no apprehension of any serious falling off. Indeed, the schedules already presented indicate that buyers are making early preparation for their fall and winter supplies, and as the call from other points appears to be quite as full as upon our own market, it is not likely that the mill men will accumulate a stock upon which business must be forced. On the other hand, there is not at present any disposition to express views of a specially buoyant character, ruling prices standing pretty full, and affording a fair margin to the producer and intermediate operator, while the consumer, having made calculations in accordance with the cost, can afford to submit gracefully. The export movement still promises well.

Eastern spruce retains a good healthy market, with no positive tendencies favorable to either buyer or seller. Now and then a cargo can be reached a trifle "off," while against this is an occasional sale at extreme valuation, but the bulk of the business will average about former cost. Advices from the mills represent much animation at present, and "hooks full of orders," as an insurance against any coming lull, but now and then a manufacturer can be found who will work in a schedule if the bid prove full. Prices range about as before, or say $14@16 per M for randoms, and $16@18 for specials, the latter for extra difficult.

White pine has gone out so freely this season on export orders as to leave scarcely any accumulation of shipping grades, and with the home consumption also free stocks generally are moderate. Moore goods are coming forward, but at a cost which must lead to firm holding, even if they do not find early sale, and the latter appears to be the strongest possibility. Accounts from the primary points are supporting. We quote $17.00@19.00 per M for West India shipping boards; $24.50@26.00 for South American do.; $16.00@16.50 for box board; $17.00@17.50 wide and sound do.

Yellow pine is well sustained in price, finds a good general demand, and the market throughout, according to the majority of reports, seems to be in a healthy, cheerful condition. Manufacturers are in some cases able to give rather better time on schedules, but all keep away, and do not find it necessary to shade cost to secure customers. For direct shipment from primary points the demand has been better of late, but also quite particular over quality. We quote random cargoes at about $24.00@26.00 per M; ordered cargoes, $26.00@28.00 do. green flooring boards, $24.50@26.50 do.; and dry do. do., $27@29. Cargoes at the South, $15@19 per M for rough, and $20@24 for dressed.

Hardwoods of attractive quality continue in small supply, and secure a good demand as soon as offered with full prices bid on all kinds. The offerings at interior points are small, and owners' ideas extreme for anything in mercantile order. We quote at wholesale rates by carload about as follows: Walnut, $77@85 per M; ash, $35@38 do.; oak, $40@45 do.; maple, $30@35; chestnut, 1st and 2nd, $30@35; do. do. culls, $18@20 do.; cherry, $50@55 do.; white wood, ½ and § inch, $25@27.50, and do. inch, $33@35 do.; hickory, $35@45 do., for Western, and $65@75 good nearby stock.

Shingles not unusually active, but selling well, and prices sustained without much difficulty. The supply is not very large or well assorted. We quote Cypress at about $6 for saps and $8.50@9 for hearts; pine shipping stocks, $4 for 18-inch, and Eastern saw grades at $2.50@4.50 for 16-inch, as to quality and quantity. Machine dressed cedar shingles quoted as follows: For 30-inch, $16@22.25 for A and $28.75@33.25 for No. 1; for 24-inch, $6.50@16 for A and $16.75 @23 for No. 1; for 20-inch, $5@10.50 for A and $11.25@11.75 for No. 1.

LATH.

The market has shown less irregularity than last week, and presented few items of positive interest. Supplies were a little more plenty and occasionally quotations somewhat slow, but receivers appear to have placed all cargoes without shading cost, and the current quotation remains at $1.75 per M. A few arrivals may be expected every week, it is said, but nothing liberal or oppressive, and advices at hand indicate that quality will run good.

SAGINAW VALLEY.

JULY 27.—The abundant activity in this market last week continues in increasing measure. It is a genuine surprise, the eagerness for lumber. The transactions, from their size and frequency, are really bewildering, when some of the dragging periods of the past year are recalled. It is considered a poor day when sales are not reported aggregating five or six million feet. Friday last the reports showed that over six and a half million feet changed hands. As for prices, they have covered a pretty wide range on some grades. There was never more firmness felt, and it may really be said that prices have advanced, although some of the figures made in the transactions are the same as have appeared from time to time. The true state of the case will be revealed in the notice of sales below. The east, west and south have competed with each other in this market the past week, Chicago buyers being on the ground in numbers, picking up lots to suit their trade, their requirements being largely bill stuff, although they have bought quite a quantity of boards and strips. Ohio, New York and Pennsylvania dealers have also placed orders here.

The advance of lumber at Chicago of course strengthens this market, and under the extraordinary demand prices on the river may be expected to advance. The following sales have been reported the past week:—1,100,000 feet common stock at $6.50, $13 and $32; 300,000 feet at $7, $14 and $32; 1,200,000 feet at $8, $16 and $36; 500,000 feet at $7, $14 and $35; 300,000 feet at $7, $14 and $32; 1,200,000 feet at $8, $16 and $35; 1,000,000 feet at $7.50, $15 and $35: 700,000 feet at $7, $14, and $33; 1,000,000 feet at $7.50, $15 and $35; 125,000 feet at $7.50, $15 and $35; 200,000 feet at $8, $16 and $36; 600,000 feet at $7, $14 and $35; 1,000,000 feet at $7.25, $14.50 and $35; 9,000,000 feet at $7, $14, $32, $7.50, $15 and $35; 350,000 feet, prices not learned; 175,000 feet Norway bill stuff at $9; 1,600,000 feet Norway bill stuff at $8 and $10; 350,000 feet prices not learned; 3,000,000 feet at $7, $14 and $32; 2,800,000 feet, price not reported; 2,600,000 feet, price not reported; 450,000 feet, price not reported; 1,250,000 feet, price not reported; 500,000 feet at $7, $14 and $32; 1,000,000 feet at $7.50, $15 and $35; a choice lot, amount not learned, at $8, $16 and $40; 975,000 feet Norway bill stuff at $8@10; 2,000,000 feet pine lumber at $6.75, $13.50 and 32; 1,500,000 feet at $7, $14, $7.50, $14.50, $32 and $35; 200,000 feet at $7, $14 and $35; 300,000 feet at $7, $14 and $33; 300,000 feet at $9, $17 and $36; 510,000 feet at $7, $14 and $33; 1,000,000 feet at current rates; 425,000 feet at $7.50, $15 and $35.

Freights remain the same as quoted last week, namely: Bay City to Buffalo and Tonawanda, $2.25 per M; Saginaw to same ports, $2.50; Bay City to Ohio ports, $1.75; Saginaw to Ohio ports, $2; Bay City to Chicago, $2.50; Saginaw to Chicago, $2.75.

The amount shipped the past week has increased over the previous week, but the season's shipments have not yet overtaken in quantity those of last year at the same date, and if they are going to this season it is time some sign of it appeared. The amount of clearances of lumber to July 23, last year were over 375,000,000 feet; to the same date this year the aggregate is 304,000,000.

The shipments of forest products from the river for the week ending July 23 was as follows:

Lumber, feet	32,182,000
Lath	1,458,000
Shingles	5,250,000
Hoops	480,000
Shooks	208,000
Staves	44,000
Cedar posts	2,500

Of these amounts there was cleared from East Saginaw 10,360,000 feet of lumber and 3,350,000 shingles, the balance clearing from Bay City.

The total shipments of lumber, shingles and lath from the river for the season to date were as follows:

Lumber, feet	304,925,124
Shingles	54,253,600
Lath	7,609,000

Shingles are in good demand and prices firm.

Quotations are: River brands, $2.10@2.20 for clear butts and $3.10@3.20 for XXX; country brands, $2.00@2.10 for clear butts and $3@3.10 for XXX.

RAILROAD FREIGHTS.

The following are the present railroad freight tariffs from the Saginaw Valley to principal points, for 10 tons, as reported by Mr. O. Waters, Commercial Agent M.C.R.R.:

Albany, N.Y.	$52 00
Burlington, Vt.	84 00
Buffalo, N.Y.	33 00
Boston, Mass.	68 00
New York City	58 00
New Haven, Ct.	68 00
Portland, Me.	68 00
Rochester, N.Y.	43 00
Rome, N.Y.	55 00
Syracuse, N.Y.	53 00
Springfield, Mass.	68 00
Schenectady, N.Y.	52 00
Utica, N.X.	56 00
Worcester, Mass.	68 00

CHICAGO.

JULY 20.—The principal change in prices since last report has been in piece stuff, which was advanced again on Saturday to $11.50 and $12 for ordinary lengths, by which is meant eighteen feet and under. Longer stuff is higher in proportion. These figures are said to be obtained without difficulty, though some of the dealers continue to talk of a possible reaction in the prices of this kind of lumber later on. It is expected now that more piece stuff will come to the market than heretofore in proportion to the quantity of inch received, for the reason that it has advanced so much that the manufacturers can afford to make it instead of putting so many of their cheap logs into inch lumber. It will require but a short time to change the character of the receipts in this respect considerably, and we may therefore look for a more liberal supply of dimension on the market within a few weeks.

CARGO QUOTATIONS.

Joist and scantling, green	$11 50@12 00
Mill run, choice green	16 50@21 00
Mill run, medium, green	13 50@16 50
Mill run, common, "	11 50@13 50
Shingles, standard	2 80@ 2 85
Shingles, extra A	2 90@ 3 00
Lath	@ 1 75

LAKE FREIGHTS.

Manistee	$2 12½
Muskegon	1 62½
Ludington	1 87½
Grand Haven	1 62½
Menominee	2 12½
Sturgeon Bay	2 12½
White Lake	1 75
Ford River	2 00

Receipts and shipments of lumber and shingles for the week ending July 19:

	RECEIPTS.		SHIPMENTS.	
	Lumber.	Shingles.	Lumber.	Shingles.
1881	66,346,000	33,127,000	27,684,000	3,260,000
1880	63,857,000	24,142,000	21,280,000	1,070,000

Receipts and shipments of lumber and shingles from January 1 to and including July 19;

	RECEIPTS.		SHIPMENTS.	
	Lumber.	Shingles.	Lumber.	Shingles.
1881	740,692,000	322,473,000	415,023,000	67,344,000
1880	612,921,000	302,327,000	353,274,000	52,161,000

MINNEAPOLIS.

The Mississippi Valley *Lumberman* of the 22nd ult. says:—All things work together for good to such as raised their price lists promptly and regularly, which remark we explain as meaning that those firms and markets who first took our advice and raised prices have netted the largest amount of satisfaction and money while those who have hung back would like to hire some one to kick them. T'was ever thus etc. News from all quarters are of the most cheerful character pour in upon us. A correspondent writing from St. Louis says "we can do no more lumber business in this city until we have more Railroads to carry it away, and in prices we lead the markets of America." Another friend in Hannibal writes us "trade has continued with unprecedented activity during the whole summer and prices have been maintained throughout without an inclination to weakness. The advances that have been made from time to time have been fully sustained and have served to stimulate the demand rather than retard trade."

Dubuque, Davenport and other river cities have all the trade they can handle at the late advance. Minneapolis is getting rid of over 5,000,000 feet per week and only sawing about 6,500,000 feet. Heavy log sales are reported from the St. Croix where they are closing out the remnants of their winters cut at good round prices. Logs elsewhere are becoming valuable. A sale is reported of 5,000,000 feet at Oshkosh to the Diamond Match Co., at $17 per M for Wolf river logs. Eastern Michigan is having her full share of prosperity as will be noticed in our Bay City report.

ALBANY.

JULY 25.—The following are the River Freights:—

To New York, ₱ M ft.	$ @1 00
To Bridgeport	@1 37½
To New Haven	@1 37½
To Providence, Fall River and Newport	2 00@2 25
To Pawtucket	2 25@2 50
To Norwalk	1 25@1 30
To Hartford	@2 00
To Norwich	@2 00
To Middletown	@1 75
To New London	@1 75
To Philadelphia	@2 00

Quotations at the yards are as follows:—

Pine, clear, ₱ M.	$50 00@60 00
Pine, fourths	45 00@55 00
Pine, selects	40 00@50 00
Pine, good box	14 00@28 00
Pine, 10-in. plank, each	00 38@00 42
Pine, 10-in. plank, culls, each	00 20@00 22
Pine boards, 10-in.	25 00@27 00
Pine, 10-in. boards, culls	17 00@18 00
Pine, 10-in. boards, 16 ft., ₱ M.	25 00@30 00
Pine, 12-in. boards, 16 ft.	25 00@30 00
Pine, 12-in. boards, 13 ft.	26 00@28 00
Pine, 1½ in. siding, select	38 00@40 00
Pine, 1½-in. siding, common	15 00@18 00
Pine, 1-in. siding, select	38 00@40 00
Pine, inch siding, common	15 00@18 00
Spruce, boards, each	00 15@00 15
Spruce, plonk, 1½-in., each	00 19@00 19
Spruce, plank, 2-in., each	00 28@00 28
Spruce, wall strips, each	00 11@00 12
Hemlock, boards, each	00 13@00 00
Hemlock, joist, 4x6, each	00 31@00 31
Hemlock, joist, 2½x4, each	00 13@00 13
Hemlock, wall strips, 2x4, each	00 10@00 10
Ash, good, ₱ M.	38 00@45 00
Ash, second quality, ₱ M.	25 00@30 00
Cherry, good, ₱ M.	60 00@70 00
Cherry, common, ₱ M.	25 00@35 00
Oak, good, ₱ M.	38 00@43 00
Oak, second quality, ₱ M.	20 00@25 00
Basswood, ₱ M.	25 00@28 00
Hickory, ₱ M.	36 00@40 00
Maple, Canada, ₱ M.	26 00@30 00
Chestnut, ₱ M.	35 00@40 00
Shingles, shaved, pine, ₱ M.	6 00@00 00
" 2nd quality	4 50@00 00
" extra, sawed, pine	4 20@04 25
" clear, "	3 25@00 00
" cedar, mixed	3 00@00 00
" cedar, XXX	3 75@00 00
" hemlock	2 25@00 00
Lath, hemlock, ₱ M.	1 50@00 00
Lath, spruce, "	1 75@00 00
Lath, pine, "	2 00@00 00

OSWEGO, N.Y.

JULY 25.—The following are the quotations:—

Three uppers	$42 00@45 00
Pickings	32 00@35 00
Fine, common and dressing	20 00@25 00
Common	14 00@16 00
Culls	11 00@13 00
Mill run lots	17 00@22 00
Sidings, selected, 1, 1¼ inch	30 00@37 00
Mill run, 1x10, 12 in.	16 00@21 00
Selected "	20 00@25 00
Strips, 1 and 1¼ inch mill run	14 00@18 00
" " " culls	10 00@13 00
1x6 selected for clapboards	25 00@35 00
Shingles, XXX, 18 inch, pine	3 75@ 3 85
XX, " "	2 75@ 2 85
XXX, 18 inch, cedar	3 00@ 3 10
XX, " "	2 25@ 2 40
Lath	1 40@ 1 40

BUFFALO.

JULY 25.—The following are the latest quotations for cargo lots:—

Uppers	$35 00@40 00
Common	17 00@20 00
Culls	11 00@12 00
Dressing stocks	18 00@20 09
Dressing sidings,	17 00@10 00

LOGS.

The *Stillwater Lumberman* says:—Gillispie & Harper report the following log sales: Page, Dixon & Co., Dubuque, 140,000 feet; Renwick, Shaw & Co., Dubuque, 400,000 feet; Quincy Lumber Co., Quincy, Ill., 600,000 feet; Gales & Wightman, Port Byron, 500,000 feet; Dubuque Lumber Co., 70,000 feet; Hemingway, Barkley & Co., Lansing, Ia., 600,000 feet; St. Croix Lumber Co., 100,000 feet; C. N. Clark, Dubuque, 200,000 feet. By the steamer *Nina*, 14 string raft to Gardner, Batchelder & Co., Lyons; and 8 strings to C. L. Coleman, by the *Rugby;* 14 strings, by *Mark Bradley*, to Taber & Co.

SINCE the first of March Hugh Sutherland & Bro. have received by rail 748 cars of lumber, amounting to about 7,480,000 feet, besides over two million feet by water, a large portion of which was shipped by the North-West Navigation Company to Brandon. They have found it necessary to keep their saw-mill, Winnipeg, running night and day, and even now they cannot keep up with the demand.

DULUTH.

The *Lake Superior News* says:—The long faces of our lumbermen about these days are supposed to be owing to the rise of $1 per M on lumber. The Chicago and Minneapolis markets advanced some little time ago, and our lumbermen have concluded not to get left. The extraordinary demand for lumber, and the hanging up of so many logs this spring are the causes of the rise. It is said that one firm in Duluth will make from $10,000 to $15,000 by this rise.

LIVERPOOL.

The *Timber Trades Journal* of the 25th June, says:—

The past week has shown a little more liveliness than some of its predecessors, but this in a great measure is due to the auction sales, which have added to the ordinary amount of work done by private treaty. The arrivals have been few, and have consisted chiefly of spruce deals; and, as the demand for these goods is falling off, we have a drooping market, as will be seen from the particulars of last Friday's sales detailed below, when Messrs. A. F. & D. Mackay offered two cargoes from St. John, N.B., one from St. Margaret's Bay, and some stored lots, together with birch timber, Quebec pine deals, and other woods. There was a fair attendance of buyers, and although there was an indication of desire to meet the wishes of the buyers, a part of one cargo of St. John, N.B., and about two-thirds of the cargo from Margaret's Bay were withdrawn. The stored spruce deals also were withdrawn, for want of competition, and the prices bid for the American black walnut, 45 logs, did not seem sufficiently high to warrant a sale, as only 4s. per foot was offered for the largest wood, viz., 20 to 24 in. deep. The spruce deals sold as follows:—

	£ s. d.		£ s. d.
St. John, N. B.—			
16 to 25 ft. 3×11	7 2 6	to	7 7 6
12 " 15 " 3×11	6 15 0	"	6 17 6
9 " 11 " 3×11	6 12 6		
16 " 26 " 3×9	6 12 6		
12 " 15 " 3×9	6 5 0	"	6 12 6
9 " 11 " 3×9	6 2 6		
16 " 26 " 3×7	6 5 0		
12 " 15 " 3×7	6 2 6	"	6 5 0
9 " 11 " 3×7	6 2 6		
9 " 25 " 2½×7	6 2 6		
9 " 24 " 3×8, 10 and 12	6 7 6	to	6 15 0
9 " 24 " 2½×9 and 11	6 12 6		
Margaret's Bay, N.S.—			
9 to 27 ft. 3×9 and 11	6 17 6		
9 " 28 " 2½×7	6 15 0	"	6 17 6
9 " 28 " 3×6	6 7 6		
Rough boards	5 10 0		

Pailings, chiefly 4½×3, 70s. per 1,200 pieces.
St. John, N.B., pine deals unassorted, 9 to 23 ft. 3×7 to 13 and 2½×7, £6 12s. 6d.
Sawn spruce timber, small sized, 4 to 9 in. square, 8d. to 9½d. per ft.
St. Margaret's Bay birch timber—

16 in. and upwards deep	18d.	per ft.
14 and under 16 in. "	14½d to 15d.	"
8 to 13 in. "	12d. " 12½d.	"

On the same day Messrs. Farnworth & Jardine offered a cargo of Pensacola hewn pith pine timber just landing, which met with good competition, and about two-thirds of the cargo was sold at the following prices:

20 to 24 in. deep,	22d.	to 27d.	per ft.
19 "	20½d.	" 21½d.	"
18 "	18d.	" 18¾d.	"
16 " 17 "	17d.		"
15 " 16 "	16½d.	" 17½d.	"

The remainder of the cargo was withdrawn.

The *Timber Trades Journal* of July 9th says:—With the arrival of several timber laden vessels from Quebec the quays are now beginning to wear a busy aspect, but so far there has not been much done in the way of delivery out of the fresh import.

From the usual monthly return given below it is evident that in nearly every article the stock is in excess of what it ought to be at this time of year, yet we must not overlook the fact that the consumption has not shown any marked decrease, for it compares very fairly with that of the corresponding month of last year.

A Fool Once More.

"For ten years my wife was confined to her bed with such a complication of ailments that no doctor could tell what was the matter or cure her, and I used up a small fortune in humbug stuff. Six months ago I saw a U. S. flag with Hop Bitters on it, and I thought I would be a fool once more. I tried it, but my folly proved to be wisdom. Two bottles cured her, she is now as well and strong as any man's wife, and it cost me only two dollars. Such folly pays."—H. W., Detroit, Mich.—*Free Press.*

DYSPEPSIA.—Strenthen your digestion—tone the stomach for utilizing and assimilating every atom of food you take; the body needs it for strength and vigor. *Zopesa* cleanses the entire system, stimulates the Liver, keeps you regular, and able to eat ten-penny nails. Letters and postal cards come in daily, telling of cures and help frem *Zopesa*, from Brazil. *Positive proof* of the health and vigor it gives in a ten cent sample. Ask your druggist.

GLASGOW.

The *Timber Trades Journal* of the 25th June says:—

There has been rather an improved feeling in the wood market here during last week.

On Thursday, the 16th inst., Messrs. Edmiston & Mitchells brought forward to public sale, at Yorkhill Wharf, an attractive assortment of Canadian and Norwegian goods, also parcels of black walnut, &c. There was an unusually large attendance of town and country buyers, the Auction Hall being quite filled. Of the Quebec deals, the extra breadths (12 in. and broader) were most in demand, and sold fairly well, and will be seen from the prices undernoted.

For the walnut timber, which was only of ordinary quality, there was spirited competition, a considerable proportion going to the east coast.

On Wednesday, the 22nd, Messrs. Singleton, Dunn & Co. held an auction sale of deals, viz., a large cargo of St. John, N.B., spruce just discharged ex-steamer. There was a good demand, the entire cargo being sold at prices as undernoted.

The stock of spruce deals now in first hands here is extremely light.

AUCTION SALES.

On 22nd inst., at Glasgow, Messrs. Singleton, Dunn & Co., brokers:—

St. John, N.B., spruce deals—

10 to 27 ft.	15×3	11d. per cub. ft.
10 " 29 "	14×3	11½d. "
10 " 27 "	13×3	11½d. "
10 " 27 "	12×3	11d. to 11½d. "
10 " 20 "	11×3	11d. " 11½d. "
21 " 27 "	11×3	12¾d. "
10 " 26 "	10×3	11d. to 11¾d. "
21 " 30 "	9×3	11¾d. "
11 " 20 "	9×3	11d. to 11½d. "
10 "	9×3	10½d. "
13 " 26 "	8×3	10½d. "
10 " 12 "	8×3	10d. "
18 " 25 "	7×3	9½d. "
15 "	7×3	9½d. "
16 to 17 and 10 to 14 ft.	7×3	9d. "

St. John, N.B., spruce scantlings—

9 to 24 ft.	6×3 and 2½d.	9½d. "
9 " 25 "	5×3 "	8½d. "
9 " 25 "	2 to 4×3	10d. "

St. John, N.B., spruce deal ends—
7 to 16×3 9d.

THE Hart Emery Wheel Co., of Hamilton, commenced operations in the early part of 1880, and from their experience since that time the following statement is deduced:—At the commencement they procured from Detroit persons well versed in the business, who soon imparted to the others engaged a practical knowledge of the business, after which they were returned to their former places of employment in Detroit. Since the start on a small scale the business has day by day increased, until now seven times as many hands are engaged as formerly. Wages are also higher, in most cases rising fifty per cent. The sales are growing larger day by day, and the facilities for manufacturing this class of goods are being increased to fill the growing wants of the consumer, while the charge for their product is greatly lessened. As to the effect of the tariff on their trade the company are fully satisfied with its workings. They have a protection of 7½ per cent., which to a great extent debars American competition; and at the same time their goods are of better quality than those furnished on the other side of the line.

D. GILMOUR, Esq., of the firm of Gilmour & Co., was in Campbellford on Monday last, with a view to shipping lumber there. If he is successful in purchasing a suitable site, the Company will also establish a regular supply depot, like unto the one recently built by Messrs. Rathbun & Son.

Honored and Blest.

When a board of eminent physicians and chemists announced the discovery that by combining some well known remedies, the most wonderful medicine was produced, which would cure such a wide range of diseases that most all other remedies could be dispensed with, many were skeptical; but proof of its merits by actual trial has dispelled all doubts, and to-day the discoverers of that *great medicine*, Hop Bitters, are honoured and blest by all as benefactors.—*Democrat.*

BY THE TIMELY USE of the Extract of Wild Strawberry, you may avert all disagreeable summer complaints, diarrhœa, dysentery, cholora morbus, etc., nothing is so pleasant in its cure, so rapid, reliable and effetual, as Dr. Fowler's extract of Wild Strawberry. And the value of this medicine is an antidote in sour stomach, colic, cramps, seasickness, vomiting, and other irritations of the stomach and bowels is inculculable. It is safe and sure, and should be carried in the haversack of every traveller and tourist.

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We watch the interest of our Customers. Our stock is FULL of the very best goods in Scotch, English and Canadian Tweeds.

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First Prize, Industrial Exhibition	Toronto, 1879
First Prize, Industrial Exhibition	Toronto, 1880
International Medal, Centennial Ex	Philadelphia, 1876

None genuine unless with a STAR on the head of rivets. Send for Price Lists and discounts.

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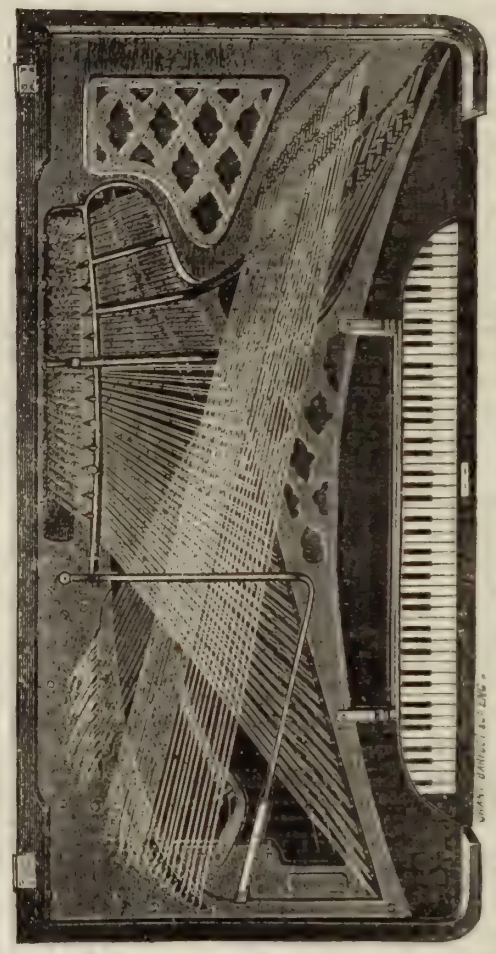

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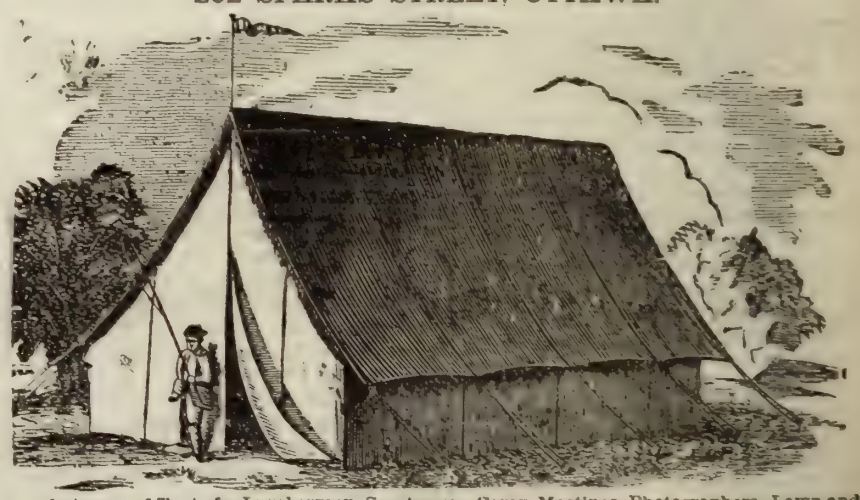

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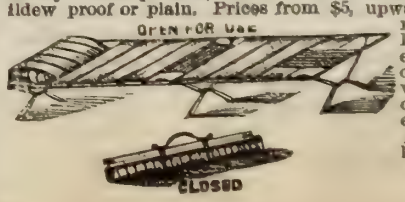

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These Wheels are Wire Strengthened

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Neither Animal nor Vegetable Glue or Gum being used in their composition, they are NOT LIABLE TO HEAT, and give out no Odors, while

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We refer to the following well known Saw Manufacturers for Opinions as to the Quality of our Wheels :

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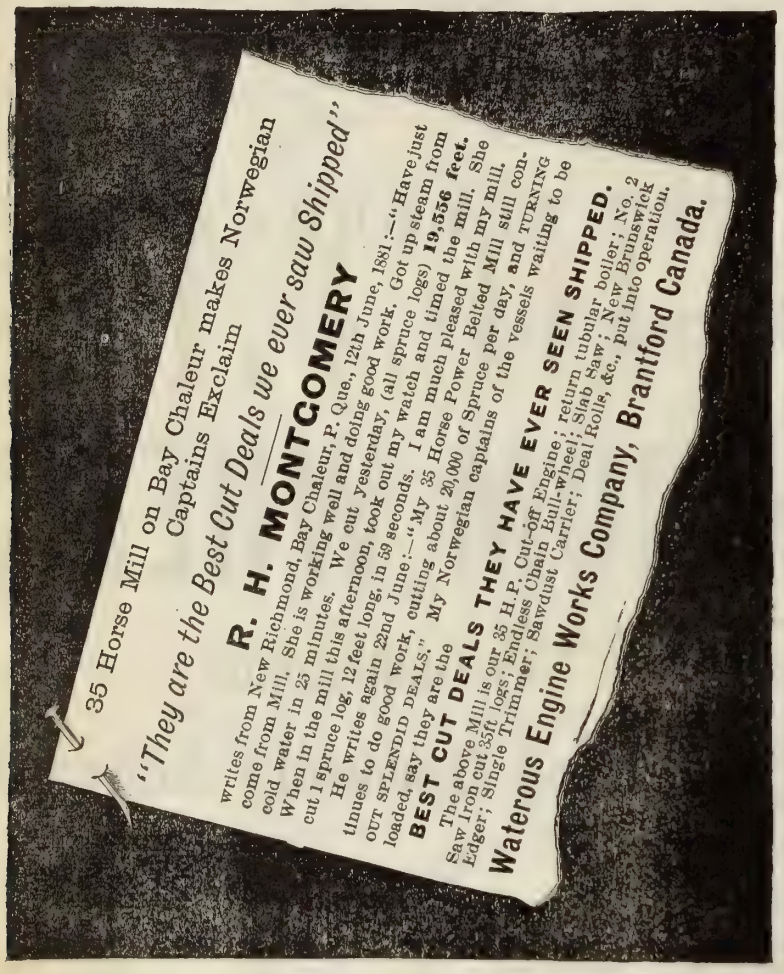

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Medal and Diploma ..... Centennial Exhibition, 1876
International Medal and Diploma, Sydney, Australia, 1877

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Only Medal for Parlor Organ, Provincial Exhibition, 1878
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SINGLE OVEN STOVE

Top surface contains six 10-inch holes, with ample room between, and one oven 16 x 24 x 26.

DOUBLE OVEN STOVE

The Double Oven has a top surface containing twelve 10-inch pot holes, with two ovens, each 16 x 24 x 26. One fire-box of suitable size for area to be heated. Below will be found Testimonials from some of the leading Lumbermen, who have used my Wrought Iron Cook Stoves since I ommenced manufacturing them. They are the names of gentlemen who are well known and eliable, and will carry more weight than any recommendation of my own could do.

The Best Stove I have ever Used.

PETERBOROUGH, May 31, 1880.

ADAM HALL, Esq., Peterborough. Dear Sir,—I have used your Wrought Iron Cooking Stove in our lumbering operations since its introduction here, and have no hesitation in saying that I prefer it to any other. For durability, economy and efficiency, where a large number of men are employed, it is the best stove I have ever used. You can, with confidence, offer it to hotels, boarding houses and lumbermen.

Yours truly, THOS. GEO. HAZLITT.

The Stove for Lumbermen.

PETERBOROUGH, June 1st, 1880.

ADAM HALL, Esq., Peterborough. My Dear Sir,—We have used your Wrought Iron Cooking Stove and find it is very satisfactory for lumber operations, especially so on drives. We can recommend it highly.

Yours truly, IRWIN & BOYD,

Gives the Greatest Satisfaction.

PETERBOROUGH, June 3rd, 1880.

A. HALL, Peterborough. Dear Sir,—I have had the Wrought Iron Cook Stove, purchased from you, in constant use ever since last fall, and it gives the greatest satisfaction in every respect. I can recommend them highly to any one who is in the lumber business. Very truly yours, GEO. HILLIARD, M.P.

EVERY STOVE GUARANTEED

All the necessary TINWARE and CUTLERY for Shanties suppied at the Lowest Prices.

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to Defy Competition.

SHIPS BELLS

ETC., ETC., ETC.

ALL REQUISITES IN BRASS FOR SHIPS FURNISHED.

ALSO,

GALVANIZED WORK.

Corner of Francois and Roch Streets,

PALACE HARBOUR, ST. ROCH, QUEBEC.

EMERY WHEELS FOR SAW GUMMING!

Solid Emery Wheels are now almost in universal use for the purpose of gulletting and gumming saws. Statistics show from 25,000 to 30,000 saw-mills in the United States. Many of these run only a single saw each. A one-saw mill would use one or two wheels a year, costing $3 to $4 each, and when such small mills order single Emery Wheels from the factory, the express charges often equal the cost of the wheel. There was a time when the quality of Emery Wheels was so uncertain, and the demand so fickle, that storekeepers could not afford to carry them in stock. Now, however, Saw Gumming Wheels have become as staple an article as Files, and every dealer in saws, Hardware and Mill Supplies can afford to carry a few dozen standard sizes in stock. Large dealers order stocks of $500 to $750 worth at a time. Saw Gumming Wheels are used with the edge (or face) square, round, or beveled. Probably seven-eigths of all in use are beveled.

The principal sizes are:

8x¼, 8x⅜, 8x½ } ⅜ in. hole. 10x¼, 10x⅜, 10x½, 10x⅝ } ⅜ in. hole. 12x¼, 12x⅜, 12x½, 12x⅝, 12x¾, 12x⅞ } Holes, ⅜, ⅞ and 1 inch.

Probably more wheels 12x⅜, 12x½ and 12x¾ are used than all the other sizes together. Saw Gumming Wheels are used, however, of all sizes up to 24x1½. The most frequent complaint is that Emery Wheels harden the saw so that a file won't touch it. The answer is that you don't want a file to touch it. An expert workman will shape and sharpen the teeth with an Emery Wheel, leaving the teeth *case hardened*, in which condition the saw will cut about 33⅓ per cent. more lumber than a soft saw will. Those who want to use the file, however, have only to touch the saw *lightly* a second time (after going all over it once), and this second touch will cut through the case-hardened scale.

A QUESTION OF QUALITY.

Thirteen years of experience as makers of, dealers in, and actual users of Emery Wheels, have led us to a decided opinion as to what quality is the best. We prefer for almost every use an "Extra Soft" wheel like the "Pocono." We believe that money lost through the rapid wear of the wheel is more than made up by the money saved on wages. As we cannot get every one to adopt our views, we make several qualities, so as to meet their views. We say to those who think they can only be satisfied with some other make of wheels (not Tanite), that we can furnish qualities *to match* any and every other make. If you have got used to some special quality of wheel, let us know what it is, and we can send you *a Tanite Wheel of similar quality*. Our *regular* classification of Saw Gumming Wheels is as follows:

CLASS 2. MEDIUM—HARD.—This Wheel is THE STANDARD Saw Gumming Wheel all over the world. Probably seven-eighths of all the Saw Gumming Wheels used are "Class 2." It cuts fast and keeps its shape well. Some think it too hard, some too soft. We prefer the "Pocono."

CLASS 3. MEDIUM—SOFT.—The same as to coarseness and fineness as "Class 2," but a *softer*, and therefor freer cutting wheel.

CLASS "POCONO." EXTRA SOFT.—This Wheel we prefer to all others. It is both *finer* in grain and softer than either of the above. As a Saw Gumming Wheel, Class "Pocono" is specially suited to those practical and experienced Sawyers who know how to grind with a light touch, and who want a free cutting wheel that will not create much heat.

Illustrated Circulars and Catalogue, showing Cuts of Saw Gumming Machines, and Shapes, Sizes and Prices of Wheels, sent free on application.

L13

The Tanite Co. Stroudsburg, Monroe Co. Pennsylvania

CANADIAN TRADE SPECIALLY SOLICITED.

M. Covel's Latest Improved Automatic Saw Sharpener!

Is the Most Perfect Machine that has ever been Introduced into Mills for that purpose.

CIRCULAR SAW STEAM FEED!

I would also call special attention to my

Heavy Circular Saw Mills

and for STEAM MILLS, would recommend the Steam Feed, having put in several which are giving the best of satisfaction, as will be seen by the following testimonials:—

GRAVENHURST, August 20th, 1880.

WM. HAMILTON, ESQ., Peterborough.

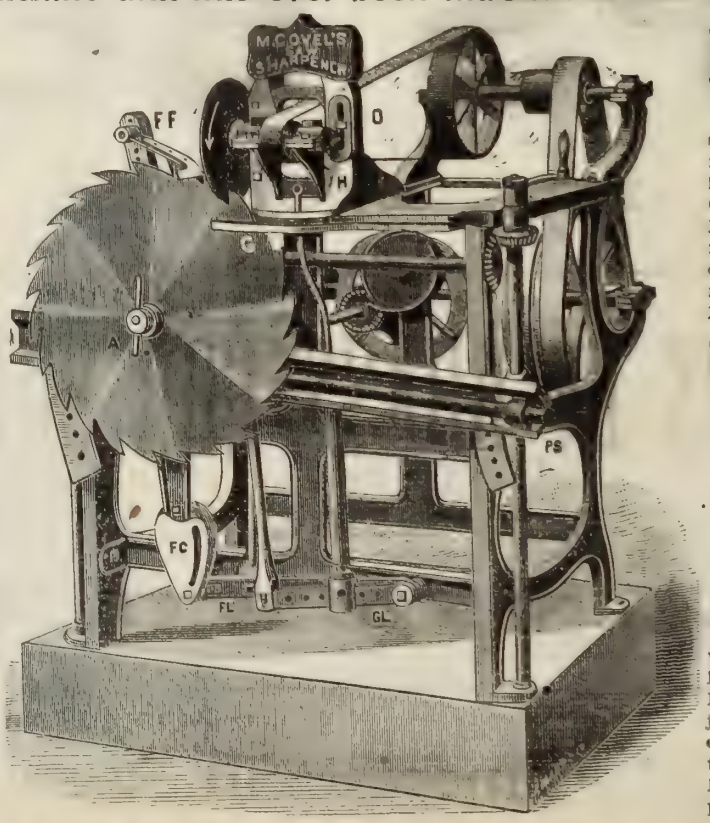
DEAR SIR—I have used your Steam Feed for near four months, and it has given me perfect satisfaction in every way; it is admitted by every person who has seen it work to be the best feed ever invented. Since I put it into my mill, I have not lost ten minutes time fixing anything belonging to it. I can cut 18 boards 13 ft. long in one minute. It can do much smoother and better work than the pinion feed. It is easily governed and reverses the carriages instantly. I am thoroughly satisfied with it and can recommend it to any person who has a Circular Saw Mill for cutting long or short logs. I consider I have cut more lumber than will pay for the Steam Feed since I got it than I would have cut had I not put it in.

Yours respectfully,
WILLIAM TAIT,
Lumberman, Gravenhurst.

TORONTO, August 11th, 1880.

WM. HAMILTON, Peterborough, Ont.

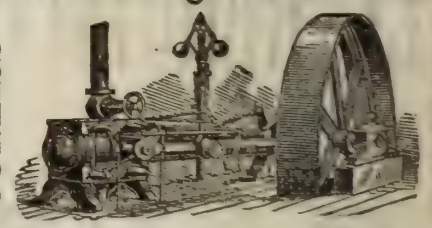
DEAR SIR—The Steam Feed you put in is working splendidly. Yours, &c.,
THOMPSON, SMITH & SON.



MILL MACHINERY!

I am also manufacturing Saw Mill Machinery, for all sizes of Gang or Circular Mills, Span or Double Circulars for Slabbing Small Logs. My Patent Jack Chain for drawing logs into Saw Mills, acknowledged by all to be the Cheapest and best ever got up; also, my Patent Lumber Markers, different sizes of Edgers, Gang Lath Mills, Trimmers, Power Gummers, and all Machinery used in a first class Gang or Circular Saw Mill; also, small Hand Gummers for use in the woods, for Cross-cut Saws. Rotary Pumps of different sizes, for Fire Protection in Mills, &c.

Horizontal Engines and Boilers

CORLISS  ENGINES

Where economy of fuel is the great consideration, along with uniformity of speed, such as is required in Grist and Flouring Mills, Woollen and Cotton Factories, or large Factories of any kind, I supply the Corliss Engine. I feel justified in saying that our Style, Workmanship and Finish on this Engine will be no discredit to its renown, and certainly is not equalled in this country for economy of fuel. I have them working at 2½ pounds of coal per horse-power per hour.

L10

WILLIAM HAMILTON - - PETERBOROUGH, ONT.

PUBLISHED SEMI-MONTHLY.

The only Newspaper devoted to the Lumber and Timber Industries published in Canada.

SUBSCRIPTION $2.00 PER ANNUM.

VOL. 1. PETERBOROUGH, ONT., AUGUST 15, 1881. NO. 20.

FOR the first six months of the year there were 42,257,531 feet of lumber exported from New York. Of this amount the West Indies took 23,335,326 feet; South America, 13,700,047; East Indies and Africa, 3,346,396; Europe, United Kingdom, 2,219,529, and Europe, continent, 656,233. During the same months of the four preceding years, 34,935,899 feet were exported in 1880, 33,842,867 feet in 1879, 26,178,286 in 1878, and 27,839,860 in 1877. The figures do not include the exports of hardwoods.

ON Wednesday morning about forty of C. N. Nelson & Co.'s mill crew struck for a reduction of time from 11 to 10 per day. They paraded the streets, and succeeded in getting about forty of Hersey, Bean & Brown's mill crew to join them. These were joined by Jordan & Mathews' and J. Mulvey's rafting crew. The crowd marched to Schulenberg Boeckeler's mill and attempted to stop the mill, but Earnest Hospe's revolver induced them to give up the job. They also failed to induce Isaac Staples' crew to join them. Nelson & Co. and Hersey, Bean & Brown's mill are still running with half crews. The mill owners declare they will not reduce the working time, and the end is not yet.

THE Mississippi Valley *Lumberman and Manufacturer* remarks that from present appearances the great timber country of northern Wisconsin and Minnesota will be gridironed with railroads the next five years. Arrangements are being made to commence work on half a dozen, and as these projects are all gotten up as feeders and extensions of the great railroad lines of the northwest there is little doubt but that they will all be constructed. In the lumber way the most important of these lines is the timber belt railway, which is designed to run east and west through northern Wisconsin. The Wisconsin central railroad has had cut along its lines during the last winter 215,000,000 feet of logs, or nearly the cut of the whole upper Mississippi and Rum river country, and considerably more than was cut on the St. Croix river.

AN Oregon prophet, awake to the coming importance of the lumber interest in that country, glowingly asserts that the Pacific slope now offers the most considerable supply of lumber remaining on the continent. The development of the projected railway system of Oregon will open up the lumber trade of that State, which will soon become more extensive and lucrative than its fisheries and wheat production. It is also predicted that Oregon lumber will supply the markets of Montana, Dakota, and even Chicago. This authority further says that within a few years the mountains, where the choicest timber is to be found, will be penetrated in all directions and at all points, and the lumber will be run out on tramways, or driven down the streams; and that in ten years from now the mountain lumber manufacture will be an immense business. Here, he says, is not only the easy and natural source of supply, but the only possible one. Though the supply cannot be considered inexhaustible, it is thought to be good for a hundred years.

THE following table shows the cost of thick clear lumber in Boston, Mass., shipped from Chicago, Detroit, Mich., and Tonawanda, N.Y., the current prices and rates of freight being used in the calculation :—

	CHICAGO.	DETROIT.	TONAWANDA.
Two inch clear.....	$46 00	$47 00	$45 00
Dressing.....	1 50	1 50	1 50
Freight.....	7 00	5 50	3 50
Cost in Boston...	$45 50	54 00	50 00

These figures show a difference of fifty cents and $4.50, respectively, between the prices received by the Detroit and Tonawanda deals, and that obtained for the same quality of stock by any Chicago man who may be fortunate enough to sell it. The comparison, therefore, assuming that Chicago prices fix the value, proves that the Detroit and Tonawanda dealers are selling their lumber for less than it is worth; at the first point the price should be $47.50, and at the second $49.50.

THE WORLD'S PROGRESS.

From a book entitled "The Balance Sheet of the World," published in London not long since, are gleaned the following interesting facts and conclusions. One striking feature of the work is an exhibit of civilized progress during the decade from 1870 to 1880. It is shown by the table below :—

	Per Cent of Increase.
Population.....	9.76
Agriculture.....	8.58
Manufactures.....	18.60
Commerce.....	38.20
Mining.....	47.06
Carrying trade.....	53.22
Earnings of nations.....	19.84
Public wealth.....	10.57
Taxes.....	22.34
Public debt.....	43.39

It will be noticed that manufactures increased more than double the percentage of agriculture, and commerce more than four times that of agriculture. Mining and the carrying trade mounted still higher in comparison. A careful student of human progress, by a survey of these figures, is led to inquire whether agriculture is really losing ground in the race with our industries. If all material progress is based on agriculture, one might be led to conclude that the business structure of the world is in danger of becoming top-heavy. But as civilization means the development of artificial life, and the most perfect use and economy of the raw material, such a conclusion would be hasty and immature.

BURDOCK BLOOD BITTERS cures scrofula, erysipelas, salt rheum, piles, and all humors of the blood. Cures dyspepsia, liver complaint, biliousness, constipation, dropsy, kidney complaints, headache, nervousness, female weakness, and general debility.

PIONEER SAW-MILLS IN EUROPE.

A writer in the *Timber Trades Journal* says that the exact date of the first practical employment of the saw-mill is not known. The earlier mills were driven by water-wheels and windmills, steam as a motive power being then unknown. The Greek and Roman writers, although in their works referring to machines for sawing stone and marble, make no mention of any machine for sawing wood, from which it may be inferred that such machines did not exist in their time. The first record we have of the saw-mill in Europe is in reference to a mill erected in Germany, on the river Boer, in the fourth century. Beecher, in his "History of Inventions," says that saw-mills were first introduced in Europe in the seventeenth century, but it is authoritatively given that such mills were to be found working in Bavaria in 1337.

When the Infante Henry, of Portugal, sent settlers to the Island of Maderia in 1420, he ordered saw-mills to be erected there, for the conversion into deals of the various kinds of excellent timber, with which that island abounded. In 1427 the city of Breslau, in Prussia, possessed a saw-mill which produced a yearly rent of three marks. In 1490 the magistrates of Erfurt, a town in Prussia Saxony, caused a saw-mill to be erected in a forest in the neighborhood of their town. Norway, which is covered with forests, had the first saw-mill about the year 1530. The sawing of timber by machines was then looked upon as a new art, and because the exportation of sawed timber was thereby increased, a deal tithe was imposed by Christian III., in 1545. In 1552 there was a saw-mill at Joachimsthal, in Prussia, which, as we are told, belonged to Jacob Gensen, mathematician. In 1555 the Bishop of Ely, ambassador from Mary, Queen of England, to the court of Rome, having seen a saw-mill in the neighborhood of Lyons, thought it worthy of his attention, and gave instructions to the writer of his travels to make special and particular mention of it in his report to his royal mistress. In the sixteenth century there were in use mills with several saws, whereby logs of timber could be sawed into deals and planks.

The original saw-mill consisted of a square wooden frame in which the saws were stretched, which frame, by the motion of a crank, was caused to rise and fall on wooden uprights secured to a suitable foundation. The log to be cut was placed on a horizontal bed or carriage sliding on the mill floor. The carriage was provided with a rack, worked by suitable gearing in connection with a ratchet wheel and pawl, or click, and so arranged that at the up stroke of the swing frame the click slipped over a certain number of the teeth of the ratchet wheel. During the down stroke of the swing frame the click turned the ratchet wheel, and with it the rack gearing, thereby traversing the rack carriage with the log on it.

A large number of the saw-mills of the present day are made on the same principle, one of the greatest improvements being the silent feed wheel to work the feed motion, in place of the oldfashioned ratchet wheel and click. With the silent feed wheel the rate of feed can be regulated to the greatest nicety, whereas the ratchet feed could not be regulated to a less grade than one tooth of the rachet wheel.

PENNSYLVANIA LOG LAW.

During the late heavy freshet thousands of logs escaped from Lock Haven and Williamsport boom, many of which were caught by individuals living along the river, or stranded on the islands and rocks on their way downward. The law of 1812 provided that a compensation of six cents be allowed for each log so captured or found lying on one's property. A supplement to this law was published in 1855, which provided that when a sufficient number of logs were not caught to adequately compensate for the time and trouble a reasonable amount should be paid, equal to what would have been earned by ordinary labor. But it was discovered that during the period of high water the owners of logs sent them adrift above to be caught again in the State of Maryland, where they were manufactured into the various kinds of lumber, thus depriving the Pennsylvanians of the benefit of the manufacturing lumber trade. To prevent this a law was passed in 1866, prohibiting loose logs to be transported on the Susquehanna and its tributaries, and that all loose logs should be bound together, and that all persons catching logs floating loosely in the water were to be paid fifty cents for each by the owner thereof. But there was a proviso attached to the act: "That this act shall not apply to sawlogs now lying in the said stream, nor to any case in which by reason of high water, or from any other casualty, said sawlogs may be swept out of the west branch and Susquehanna booms." It follows, then, that as to all logs sent adrift by interested parties, for the purpose of sending them to a market outside the State, which are caught on their downward way, the persons securing the same are entitled to fifty cents for each one; that all logs which by accident, such as the breaking of a boom or otherwise go adrift, are to be paid for according to the law of 1812, which is six cents a piece, where a number are held, or when a sufficient quantity has not been obtained to pay for the time occupied in catching them a reasonable compensation is to be allowed those who bring them ashore.

ATTENTION is being called to the superior quality of the pine timber grown in the northern districts of America to that which comes from the more southerly States. It is stated to be of slower growth, and consequently better matured, mellower, and of a finer texture, and the goods manufactured from it are said to give greater satisfaction.

OUR QUEBEC LETTER.

THE DEMAND FOR TIMBER AND DEALS.—THE WEEK'S SALES.—PRESENT PRICES.—OAK IN DEMAND.—AUCTION PRICES.—THE SUPERIORSHIP OF CULLERS.

QUEBEC, August 8.—It is satisfactory to note that since the date of my last letter to the LUMBERMAN prices have been steadily maintained, and the demand has increased for almost every kind of wood in and out of the market.

WHITE PINE.

White pine in particular is in good request, owing to the large quantity stuck up the Ottawa, which cannot possibly reach Quebec this season. Prices for this wood are very satisfactory, and higher than even the most sanguine could have expected some short time since.

Within the last few days a raft of white pine containing about 100,000 feet, 49 feet average, has been sold for 27 cents, with a parcel of red about 36 feet average, which fetched 18½ cents. Another raft of Kippewa timber, 45 feet average, containing some 85,000 to 90,000 feet of white pine and 20,000 red has been sold, the former at 28 cents, and the latter at 18½. A third raft of mixed white and red has been sold at 20 cents for the white, 38 feet average, and 13 cents for the red, 27 feet average, Another lot of Kippewa white pine has been sold for 32 cents, 49 to 50 feet average. A few smaller lots have changed hands at 27 to 31 cents for 48 to 53 feet average. A remarkably fine raft, which arrived last week from the Kippewa, is held at 38 cents. There are several more rafts under offer at this moment, and further sales will doubtless be soon reported.

Messrs. R. R. Dobell & Co., of this city, have recently purchased from David Moore, his whole stock of red and white pine now stuck at Roche a Captaine.

By the way, lumbermen will regret to learn that Mr. Dobell is just now confined indoors from the effect of a recent slight sunstroke.

AUCTION PRICES.

The saved portion of the *Bristolian's* cargo, wrecked on Anticosti, was sold here to-day by auction. The figures obtained are significant, it being of course always remembered that amounts paid at auction rarely reach the highest market value. The square pine, 3,000 feet, was sold to J. B. Charleson for 12½ cents, and re-sold to George King for 15 cents. James Connolly bought 16,000 feet board pine at 29 cents. About 1,600 deals, thirds and fourths, were sold to Jos. Archer, sen., at the rate of $34. The pipe staves were sold to a local cooper for $151 per mill, and about 1,400 w.o.w.i. were purchased by J. B. Charleson, broker, for $34 per mill.

OAK.

The apparent combination to bear themarket on oak has fallen through. One or two shippers having run out of stock were forced to buy, and the figures of late transactions compare favorably on the whole with last year's prices. Holders and manufacturers' agents, being in a position to hold out for their own, purchasers have gained nothing by holding back.

One very good dram of Canada oak, 55 feet, culls out, has fetched 44 cents. Another common lot, measured off, one-third Michigan and two-thirds Ohio, has been sold for 42 cents, a price which the same quality would hardly have brought last year.

For elm there is very little enquiry. Walnut is in demand, but there is little or none offering.

Mr. E. J. Charlton, of the Upper Ottawa contracting firm of Purpore & Charlton, shipped to-day a large lot of English dredging machinery for deepening the Upper Ottawa. The hull of the vessel is building at Pembroke. When the work is completed, there will be opened a new stretch of navigation on the Upper Ottawa, of ninety miles in length, passing through the Culbutte locks, of great importance to the lumber trade.

THE SUPERVISORSHIP OF CULLERS.

The recent death of the late Mr. W. Quinn, who for twenty-seven years held the office of Supervisor of Cullers at Quebec, has called forth an army of applicants for the office, principal amongst whom are H. J. Chaloner, a confidential clerk in the office of Hon. Thos. McGreevy, M.P., Government contractor, Mr. Jas. Patton of this city, a life long lumberman, and Mr. John Poupore, M.P., of the Ottawa district, also a well known operator in lumber. It was rumored some time ago that Mr. Quinn was to have been superannuated and Mr. Chaloner appointed in his stead. Deputations of leading lumbermen both in Ottawa and Quebec immediately waited upon the Government, and upon Mr. McGreevy, M.P., who exercises a great deal of the patronage of the Dominion Government in this district, and protested energetically against the selection for the position of any but a properly qualified officer. The Council of the Quebec Board of Trade passed resolutions to a similar effect, and the Government halted in its intended action. To-day another deputation has been selected amongst those interested in the trade in this city, to wait up Hon. Messrs. Langevin and Caron, the representatives of this district in the Cabinet, and urge upon them similar views. What the result will be cannot yet be foreseen, though it would not seem probable that the Government should desire to incur the opposition of so important and influential a section of the community as the lumbermen, by making to this important office the appointment of any unqualified party merely as a requital for party services.

AUCTION SALE OF GOVERNMENT LANDS.

I have it from the highest sources that it is the intention of the Hon. Commissioner of Crown Lands for the Province of Quebec to hold at no distant date another sale by auction in this city of Government lands. Instead of lumbering limits, however, most of the lots to be offered will probably be mineral lands.

WALNUT TREES.

To the Editor of the Toronto Evening News.

SIR,—I have just read your comment on the culture of the walnut tree, suggested by remarks on the subject by the *Times* of Hamilton. With your permission I give an instance of the great benefit that might result from the extensive culture of the walnut.

In the spring of 1839 myself and a brother transplanted two small walnut trees, which were not two inches in diameter or ten feet in height. They took root rapidly, and grew rapidly, and some eight years ago I saw and measured them. One of them had a girth of 72 and the other 65 inches, one foot from the ground. Each had a fine trunk some 20 feet to the lower limbs, and a fine spread of top of over 30 feet, and was loaded with nuts every year. They are now two as beautiful trees as can be met with, and more valuable than beautiful, and can be seen by any one passing over the Hamilton and Caledonian plank road, about nine miles south from Hamilton, on the late Bingham, now Coon Farm. You justly say it is as well to plant valuable trees as any, and if these few lines will be of any use in directing further attention to walnut tree culture I will be amply rewarded for this hasty note on the subject.

Yours very truly,

A. BINGHAM.

Flies and Horses.

Dr. J. J. Ridge, of Enfield, writes to the *Daily News*:—"The incessant torment which flies inflict upon horses during such hot weather as we recently endured may not have occurred to the minds of many. Though a minor misery, yet it is so real that I venture to ask you to allow me to describe a plan which I have found thoroughly successful in preventing it altogether, while perfectly harmless. It is simply the application, before harnessing, of a mixture of one part of crude carbolic acid with six or more parts of olive oil. This should be rubbed lightly all over the animal with a rag, and applied more thickly to the interior of the ears and other parts most likely to be attacked. This application may need to be repeated in the course of the day, but while any odour of the acid remains the flies decline to settle, and the horse is completely free from all their annoyance. The nervous, irritable state into which some horses get from the attacks of these insects is also not an infrequent cause of accidents, and these, therefore, may also be obviated. Whether the dreaded tsetse of Eastern Africa would also fight shy of similarly anointed animals I cannot say, but it deserves a trial, and if successful would be an incalculable boon. It might also prove obnoxious to mosquitoes.

EUCALYPTUS GLOBULUS.

United States Consul John Wilson, of Brussels, furnishes to the State department at Washington a translation of an article originally published in France, descriptive of this Australian tree, which has attracted some attention in this country, and if it possesses but half the good qualities claimed for it, it must be admirably adapted to the treeless regions of southern Kansas, Texas, and indeed all our prairie territory. The article appears in the consular reports for June, and is as follows:—

Nothing is more curious than this Australian tree, yesterday nearly unknown in France, and to-day on the point of producing a revolution in the sylviculture in the south, and perhaps in certain industries also. It developes with a prodigious rapidity, its wood is very hard and resinous, and is neither affected by water nor attacked by insects.

The eucalyptus flourishes in the south of France, especially in the Maritime Alps, were, thanks to the efforts of Dr. Gimbert, its culture is constantly on the increase. At Cannes its mean yearly growth is about four meters. Seedlings a year old, planted in the month of May in favorable ground, reach the height of 6 meters by the following December. Throughout all of Southern France, if planted in good ground, the eucalyptus in seven or eight years attains a height of from 20 to 25 meters. It is an elegantly proportioned evergreen, and sheds a very agreeable balsamic fragrance.

It is therefore of the highest importance to draw the attention of sylviculturists and economists to this remarkable tree, for the replantation of the forests in Southern France and Algeria. This is a source of wealth worthy of the most serious consideration.

The ordinary timber trees in France are cut from the forest, on an average, every hundred years; the eucalyptus can be cut five times in that period, or once in every twenty years.

It will be seen by this that the value of timber forests would be quintupled by the culture of this tree.

It has been calculated that a cross-tie for railroads, which now costs 8 francs in France, would only cost from 1 to 2 francs if made of eucalyptus wood.

An ordinary pine tree fit to furnish a telegraph post of 6.50 meters high requires a growth of thirty years, and costs 6.50 francs, whilst the eucalyptus will grow the same post in five years, and from this it may be seen what an economy must result from the growing of this tree for these purposes.

It is well known that, in consequence of the rapid extension of our naval construction, we are obliged to import much timber from Russia, Sweden, Norway, and the United States. The culture of the eucalyptus would in time completely relieve us from having recourse to these foreign sources of naval timber. All the masts, hulls, and indeed the entire frame work of ships can be made from this tree. All the wooden vessels that now ply between Australia and England are chiefly made of it. The whaling vessels of Hobrat Town are made of this wood, and throughout Australia it is extensively employed by carpenters, wagonmakers, wheelwrights, &c. A hectare of land, planted with the eucalyptus in 6 meters between the trees, well planted, they will have a diameter of 20 centimeters in three years, and a tree of this dimension is very useful to mechanics and wheelwrights, and can be sold for over 5 francs each. Thus the first cutting would produce 2,500 francs per hectare. At eight years, the trees of such a plantation would have acquired the dimensions suitable for railroad purposes, and each tree would be worth 20 francs. A hectare of this plantation would then be worth, according to Mr. Frothier, 6,200 francs.

Large plantations of this tree could be made rapidly to invade and cover swampy grounds, more or less previously drained, and so change its character as to entirely prevent the emanation therefrom of noxious miasma. Such plantations would prevent the direct action of the sun's rays upon the ground; would extract any excess of humidity from it, and would thus absorb all the elements of a parasitic and unhealthy vegetation. Thus, on a ground formerly uncultivated and pestilential, at the end of ten or twelve years from the planting a strong, generous and health-giving forest might be produced.

Intermittent fevers do not exist where the eucalyptus grows, and travellers think that Australia owes much of the salubrity of her climate to the fact that so much of her territory is covered with this tree.

Mr. Gimbert strongly recommends the plantation of the eucalyptus in certain regions of Spain, the treeless plains around Rome, the vicinity of Poestum, the deltas of the Var, the coast of Corsica, &c., which are during the hot season humid, and hence the seat of intermittent fevers.

The eucalyptus contains an essence which is easily extracted, and of which Dr. Gimbert has shown the happy medical properties. This essence has, among others, the property of a febrifuge, anti-spasmodic. Mr. Gimbert, who, at Cannes, was the physician of Prosper Merimee, tells us that the illustrious writer for three years used cigarettes of eucalyptus, and that they always calmed his asthmatic oppressions.

These facts speak for themselves, without it being necessary for us to add anything farther. The eucalyptus is a precious conquest, of which we must now try to profit.

IMPROVED BAND LOG SAW MILL.

The last issue of the *Scientific American* contains the following description of a new band saw-mill which is now being built by a firm of American wood-machinery builders for the purpose of securing greater economy in the manufacture of sawlogs, especially those of the more valuable woods. It says:—The machine proper, except the carriage, is mounted on a heavy cast-iron sole plate, which sustains and supports all the operative parts. The operator, without changing his position, has entire control of the mill, and can start or stop it, change the feed, or vary the direction of the carriage at will. It is massive and substantial, wheels 72 inches in diameter, and arranged so the saw can be made to run on any portion of the wheel almost instantly. The guides—upper and lower—are those peculiar to all of the Fay & Co. machines, having a wheel to receive the back thrust of the saw, and lateral supporting slide guides or packing plates to suit the thickness of the saws; the upper guide is also so arranged that it can be raised or lowered instantly to any desired size of log, and yet will always remain in a true vertical line with the lower one—a very important feature. The carriage head blocks and set works are the most improved known. The log is set with the greatest ease and convenience, and with unerring accuracy. The set works are arranged to be operated in the most expeditious manner. The carriage runs on friction rolls. The side supports are arranged so as always to secure an even thickness of the last board. Rests at the same distances apart as the side supports afford a decided advantage over ordinary mills in edging up boards and splitting plank into scantling.

The nearness together of blocks saves any change of moving of head blocks in sawing logs of different lengths. No calculation is required to leave the last board of the desired thickness.

The operator and assistant stand at the sides of the carriage, where logs can be easiest handled, and where the proper set, when slabbing, can be determined. The position of the sawyer has the further advantage of enabling him to cut different grades of lumber in the same log into the most suitable dimensions.

A single improved dog quickly operated holds securely any size of logs until nearly finished. Sliding dogs can be quickly applied to hold the last board without tearing or otherwise injuring the lumber.

The carriage can be run close to the rear of the mill building. Every part is most thoroughly constructed, and the working parts are all readily accessible. The blade is usually four inches wide and No. 18 gauge, and removes a kerf of one-sixteenth of an inch.

The enormous saving in lumber over other saw-mills by this machine we leave to our readers to compute, feeling it will be worth their most careful investigation.

PAPER pulp made from sawdust is to be sent to England from Welland, Ont. It will be tried at an English factory, and the paper sold as an experiment. If successful, several capitalists will start a factory at that place.

MILK AS FOOD FOR INVALIDS.

The value of milk as food for invalids is now so generally recognized that we believe our readers, both professional and non-professional, will thank us for condensing the following practical suggestions concerning its use from an article in the *New York Medical Record*, by Dr. James D. Trask :—

The most common objection offered to the use of milk is that it produces "biliousness." In many instances this is due to a disregard of the fact that milk ought to be looked upon as an article of food, and not as a mere drink ; consequently, to secure its perfect digestion, it should be always taken at one of the regular meals, or at a point as near as practicable midway between two meals, when something is required to bridge over this interval. Bread and milk eaten together, by both children and adults, being agreeable to the palate, is often hurriedly swallowed and in excessive quantities, and indigestion is the consequence.

Again, since modern chemistry has taught us the important part taken by the saliva in the preparation of all starch foods for digestion, we have a ready explanation of the failure of the stomach to digest bread that has been swallowed with milk without previous mastication. * * When milk is given to either children or adults with feeble digestion, the bread should be first thoroughly mixed with the fluids of the mouth and swallowed by the child or invalid before the milk is taken ; the young child must be watched as it eats, mouthful by mouthful, until the proper habit is formed.

The digestibility of milk depends, in many instances, upon the temperature at which it is taken into the stomach. This is particularly true in cases of nervous prostration. The digestive organs of these persons are almost invariably weak, and the temperature at which milk is ingested will determine whether it shall be gratefully received and readily digested, or, on the other hand, prove a source of discomfort.

On reflection it will at once appear that food, on being taken into the stomach, must first of all be warmed up to the temperature of the stomach, and this at the expense of vital heat. To raise a half pint of milk thirty or forty degrees involves the waste of considerable animal heat. This in a healthy person with vigorous digestion may not only be disregarded, but may be agreeable in its effects ; but it is far otherwise with him whose digestive organs, under any of the depressing influences productive of nervous exhaustion, are taxed to their utmost to furnish fresh supplies of enriched blood to the enfeebled nervous centres. In these cases, milk at ordinary temperatures will be felt as a cold, foreign body long after it is swallowed, and its ingestion will probably be followed by acidity and headache. It is manifestly far more economical of vital force, in these cases, to heat the food upon the kitchen range, rather than in the patient's stomach.

These remarks are especially applicable to the use of food by such persons in cold weather. In summer, when the temperature of the atmosphere and surrounding objects approximates that of the human body, drinks may be generally taken without being first artificially heated. On the return of cold weather the stomach again becomes conscious of the additional duty imposed upon it, and artificial heating again becomes necessary. * * *

Much has been said of the value of external heat as a vital stimulant. Few, however, seem rightly to appreciate the value of heat introduced into the system as a vital restorative. No more acceptable mode of accomplishing this can be devised than the drinking of hot milk. Milk heated to much above 100° F. loses for the time a degree of its sweetness and its density. No one who, fatigued by over-exertion of body or mind, has ever experienced the reviving influence of a tumbler of this beverage, heated as hot as it can be sipped, will willingly forego a resort to it because of its having been rendered somewhat less acceptable to the palate. The promptness with which its cordial influence is felt is indeed surprising. Some portion of it seems to be digested and appropriated almost immediately ; and many who now fancy they need alcoholic stimulants when exhausted by fatigue, find in this simple draught an equivalent that shall be abundantly satisfying, and far more enduring in its effects. * * * * * * * *

The following statement is a gratifying confirmation of the value of these suggestions :— A lady, whose nervous system had been severely overtaxed by the supervision of a large school for girls, and whose digestion had become seriously impaired, went to Europe for her health. She eventually consulted Sir Thomas K. Chambers, and in answer to his inquiries stated that she had made repeated attempts to take milk of ordinary temperature as an article of food, but it had never been tolerated. At the suggestion of Dr. Chambers she began to drink it after being heated, in the same quantities as before. This proved the turning point in her case. The heated milk was well borne, and her convalescence dated from that time.

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New and Commodious Brick Building ; best north o Toronto ; splendid sample rooms ; centrally located ; free 'bus. b20 JOHN KELLY, Proprietor.

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Is noted for its superior home-like comforts—a well kept table, equalling the best hotels in Toronto, and large, well-furnished rooms. Good sample rooms on ground flour. Walton Street, Port Hope.
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JOHN SHARPE, Proprietor. This Hotel has been newly opened out, pleasantly situated on Main Street, within five minutes walk of Northern Railway station. Bar kept with best assorted Wines, Liquors and Cigars. Every attention paid to guests. Good Stabling. 1yL15

Queen's Hotel,
BRACEBRIDGE.
JOHN HIGGINS, Proprietor. The proprietor (late of Georgetown,) having lately purchased the above hotel,) will endeavor to make it one of the best houses in the District of Muskoka. Tourists and hunting parties will receive every possible attention. Free 'bus to and from steamboat wharf. Terms, $1 per day. b20

The American Hotel,
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RATES REASONABLE, CENTRAL LOCATION, FREE BUS TO AND FROM ALL TRAINS.
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Fraser's Hotel,
GRAVENHURST, ONT.
HENRY FRASER, proprietor, (successor to Dougland Brown.) Mr. Fraser having purchased and thoroughly renovated and refitted that old established hotel, so long and popularly kept and owned by Dougland Brown, in the Village of Gravenhurst, is now in a position to attend to the wants of the travelling and general public. Parties *en route* to the Muskoka District, will find "Fraser's" a comfortable stopping place. The Bar and Larder are well furnished. Convenient Sample Rooms for Commercial Men. Good stabling and attentive hostler. Free 'bus to and from trains and steamboats. b26

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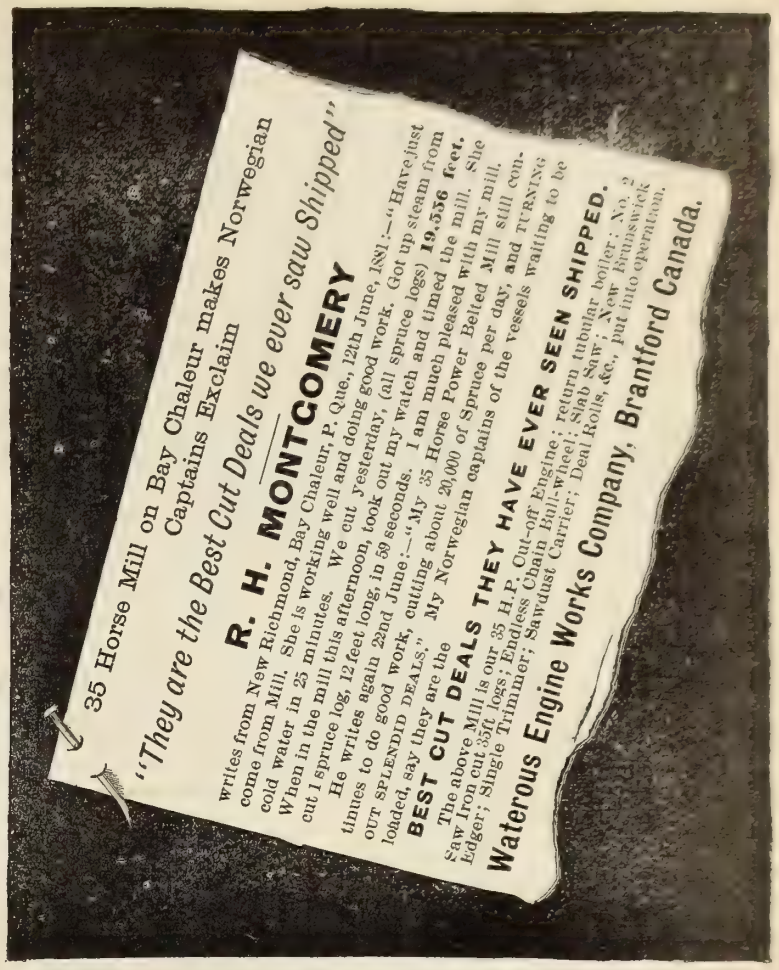

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First Prize, Provincial Exhibition	London, 1877
First Prize, Industrial Exhibition	Toronto, 1879
First Prize, Industrial Exhibition	Toronto, 1880
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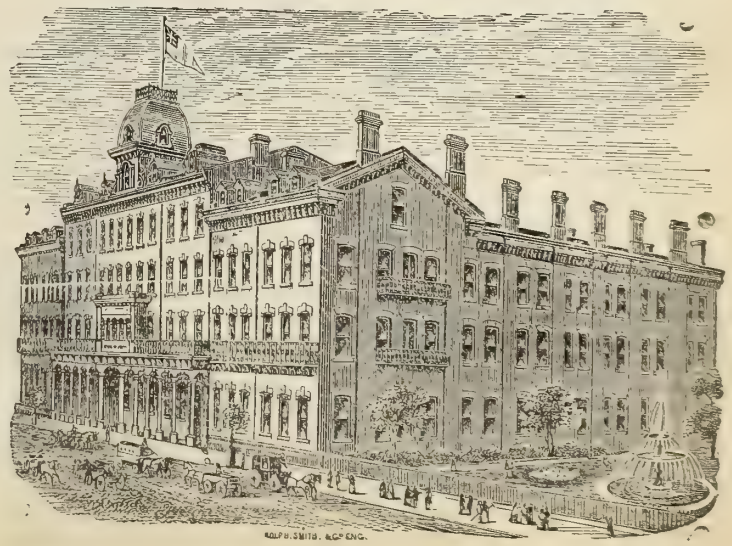

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USE OF NATURAL WOOD v. PAINTING.

As Sir Roger de Coverley would say when he wished to dodge a question, "much might be said on both sides," but Mr. Gardener states the whole subject so felicitously, says the *American Furniture Gazette*, that we will let him present his views somewhat at length :—

To answer according to the spirit of your inquiry, I should say by all means (if you do not mind the cost) use wood instead of putty. With all respect for white paint and striped paint and all other kinds of paint, there is nothing more enduringly satisfying than the natural tint and grain of the different kinds of wood suitable for building, of which we have such great variety in style and color, from the over-estimated black walnut to the rarely-used white pine, rarely used without having its natural beauty extinguished by three coats of paint. What I wish to say is, that finishing your woodwork without paint does not necessarily require the said wood to be of the kinds commonly called hard. Any wood that is not specially disposed to warp, and that can be smoothly wrought, may be used. There are several important points to be religiously observed if you leave the wood, whatever the variety, in its unadorned beauty. It must be the best of its kind ; it must be seasoned to its inmost fibre ; it must be wrought skilfully, tenderly cared for, and, finally, filled and rubbed till it wears a surface that is not liable to soil, is easily cleaned, resists the action of moisture, and will grow richer with age.

Hence, I say, by all means finish with unpainted wood, if you are not afraid of the expense ; and yet paint and varnish are good, and putty, like charity, covereth a multitude of sins. Nothing protects wood better than oil and lead, and by means of them you have unlimited choice of colors, in the selection and arrangement of which there is room and need for genuine artistic taste. Yes, good honest paint is worthy the utmost respect. When it tries to improve upon Nature's divine methods and calls itself "graining," it becomes unmitigated nonsense,—yes, and worse. It is one of the sure evidences of man's innate perversity that he persists in trying to copy certain beautiful lines and shading in wood, not as an art study, but for actual use, when he may just as well have the perfect original as his own faulty imitation. What conceit, what blindness, what impudence this reveals ! What downright falsehood ! Not in the painter—oh no ! skill is commendable even when unworthily employed,—but in him who orders it. You may buy a pine door, which is very well ; pine doors are good ; you tell every man that comes into your house it's black walnut, or oak, or mahogany. If this is not greeting him with lying lips and a deceitful heart, the moral law is not as clear as it ought to be. You may think it is of no consequence—certainly not worth making a fuss about—but I tell you this spirit of sham that pervades our whole social structure, that more and more obtrudes itself in every department of life, comes from the bottomless pit, and will carry us all thither, unless we resist it, even in these milder manifestations, as we would resist the Father of Lies himself. Truth and falsehood are getting so hopelessly confused that we can scarcely distinguish one from the other.

One other suggestion in this connection. Without either painting or graining you may get a most satisfactory effect, both in looks and utility, by staining the less costly kinds of woods, using a transparent stain that will not conceal, but strengthen the natural shading, and at the same time change its tint according to your fancy. This is an honest and economical expedient. It only requires that your lumber shall be sound, tolerably clear—a good hard knot isn't alarming—seasoned, and put up with care. The cost is less than common painting, and the effect as much better than graining as nature's work is more perfect than ours.

From the consideration of painting, *per se*, we naturally glide to the question of graining or deceptive painting, which Ruskin has just declared inadmissible. And here we may say that however much they may be at variance on other points, there is substantial accord among art writers in condemning graining. Mr. Gardener has had his tilt at it in the extract already given, and Ruskin pounces upon it with all his pugnacious virulence :

"There is no meaner occupation for the human mind than the imitation of the stains and striæ of wood and marble. The grainer must think of what he is doing, and veritable attention and care, and occasionally considerable skill, are consumed in the doing of a more absolute nothing than I can name in any other department of painful idleness. I know not anything so humiliating as to see a human being with arms and limbs complete, and apparently a head, and assuredly a soul, yet into the hands of which when you have put a brush and a palette, it cannot do anything with them but imitate a piece of wood. It cannot color ; it has no idea of color. It cannot draw ; it has no idea of form. It cannot caricature ; it has no idea of humor."

Eastlake says his say about it as follows :—"It is an objectionable and pretentious deceit, which cannot be excused even on the grounds of economy. In the last century, when English oak and Spanish mahogany could be procured at a reasonable price, the grainer's work was, of course, unneeded. In modern days the usual substitute for those now expensive woods is deal ; but deal is so soft and absorbent in its fibre that it quickly becomes soiled, and in most situations, especially when exposed to the air, it soon requires painting. But why should we paint it in imitation of oak? Everybody can see at a glance that it is *not* oak, and, as far as appearance is concerned, there are many modes of treatment which would be far more effective."

The White Water of the Arabian Sea.

With reference to the phenomenon of what is known as the "white water" of the Arabian Sea, a correspondent writes as follows :—"If the call of duty or pleasure should at any time induce any of your readers to undertake the overland journey to India, they must not fail to give instructions to be called from bed should the nocturnal phenomenon of the 'white water' occur. It is more frequently seen in the months of July and August, and is principally confined to a narrow belt to the eastward of the Island of Socotra, known in the charts of that sea as the Line of the Strongest Monsoon, and wherein the rain clouds on quitting Central Africa on their passage eastward are apparently confined. Should the moon be above the horizon, an uneasy night's rest may be anticipated, as the writer has never known the phenomenon to occur in the presence of that orb.

"To give the reader some idea of this remarkable and striking appearance, we will suppose ourselves in a steamer, about two hundred and fifty miles to the eastward of Socotra, in the position named, and in the latter end of July ; time, 1 a.m. The monsoon is blowing strongly and steadily—the night, starlight and clear—a light fleecy scud occasionally passing rapidly to the eastward, and the good vessel bowing along at the rate of fourteen or fifteen knots an hour. Suddenly we discover a light hue in the water, which in a short while assumes a snow white aspect, and in the course of a quarter of an hour extends to the horizon in all directions. The transformation of the water is perfect, the usually green color of the sea having been replaced by an appearance of whiteness like that of milk. And yet if you draw a bucket of water for inspection or analysis, you will find that it is beautifully clear, and not a vestige of anything white being visible ; nor can the microscope discover anything over and above the ordinary quantity of minute life always present in sea water within the tropics.

"The deception seems to me to admit of easy explanation, it being the result simply of reflection of color. The vessel in passing through a light, misty atmosphere, inappreciable to the eye while within its influence ; and the white watery vesicles held in suspension are in some favorable condition of air and water, reflected on the surface of the latter."—*Chambers' Journal.*

DYSPEPSIA.—Strenthen your digestion—tone the stomach for utilizing and assimilating every atom of food you take ; the body needs it for strength and vigor. *Zopesa* cleanses the entire system, stimulates the Liver, keeps you regular, and able to eat ten-penny nails. Letters and postal cards come in daily, telling of cures and help from *Zopesa*, from Brazil. *Positive proof* of the health and vigor it gives in a ten cent sample. Ask your druggist.

THEY ALL DO IT.—Everybody uses "TEABERRY" for the teeth and breath, the newest, brightest, c osiest little toilet gem extant. Try a 5 cent sample.

KEEWATIN MILLS.

These mills are situated on the line of the Canadian Pacific Railway, at the outlet of the Lake of the Woods into the Winnipeg river. Their water power is equal to anything on this continent. There is always a fall of eighteen feet, and sometimes more, if the water is high. A channel was formed for the passage of the water from the main lake into a depression which forms a small lake, at the outlet of which the mills were erected, and after driving the turbines the water falls into Darlington Bay of the Winnipeg river. A gate at the outlet into the small lake or reservoir keeps the amount of water perfectly under control, and may be closed entirely if necessary for repairs, leaving the mill quite dry, and keeping them in the winter free from ice.

The buildings were erected in the fall of 1879, and everything completed for the season's cutting at 1880. The main building is 120 feet long by 36 in width, and is three stories high. The lower storey contains five turbine water wheels and shafting required to drive the machinery above. The second storey contains three shingle machines, a bolter and lath machine, slab cutter and planing machiue. The upper storey or saw floor contains one large circular for dimension stuff, two slash saws, one double stock gang, one double edger, one trimmer and two log ways, all fitted with the latest improvements and conveniences. There is also within the walls an iron lathe and other machinery and tools required for making repairs, so that when breakages occur no time will be lost in waiting for the necessary repairs. On a level with the upper floor is a very large platform for temporary storing, hauling away, etc. The other buildings are an office, two storehouses, blacksmith shop, boarding house, to hold fifty, residence, five tenement houses, stables, etc.

The present capacity of the mills is 800,000 feet of lumber, 90,000 shingles, and 35,000 lath per day, which will be increased as required. The piling ground is situated between the mills and the track of the Canadian Pacific Railway, and is very convenient, there being room for about 6,000,000 feet of lumber with railway switch running through it. The platform of the mills extends out to the switch connection with the main track of the railway, placing them in excellent position for shipping. From 8 to 10 carloads of lumber per week have been sent to Winnipeg since the commencement of this season's cut. About 6,000.000 feet of lumber will be manufactured this season, for which there is a ready market at good prices. About seventy-five to one hundred men are steadily employed in the mills during the summer and getting out logs during the winter. Wages range from $40 to $60 per month, without board. These mills are owned by the Keewatin Lumber Company, and are conducted under the efficient management of Mr. John Mather, the largest stockholder. The timber limits of the company are all the islands of the Lake of the Woods, as well as a number on the shores of the lake, and are easily accessible by their powerful tug, which is used for towing the logs to the mills. This is one of the many institutions which will eventually occupy the narrow neck of land which forms at this point one of the finest water powers on the continent, and which will build up a large manufacturing centre, supplying the prairies of the west with various kinds of manufactured articles.—*The Progress, Rat Portage, Keewatin.*

Monster Locomotives.

The Rhode Island locomotive works are now at work on ten monster freight locomotives for the Atlantic and Pacific Railroad Company, and have furnished two which will be shipped to Albuquerque, New Mexico. The locomotives, when in running order, will weigh sixty tons each, and the tanks have a capacity of 3,500 gallons of water. The tenders weigh 35 tons each. The length of the locomotive over all is 60 feet. The cylinders are 20 inches in diameter, with 26 inch stroke. There are four pairs of couple drivers 50 inches in diameter, and one four wheel truck. The fire box is ten feet long and 43½ inches wide. The boiler is 58 inches in diameter, wagon top, and contains 200 2½-inch tubes. There are a set of steam gauge cocks for the fireman located at the back head of the boiler, and another set for the engineer, inside the cab. The tops of the cabs of these locomotives are higher than the smokestacks of the engines used on the railroads hereabouts. The height of the smokestacks from the top railing is sixteen feet six inches. Either hard or soft coal can be burned. These locomotives, compared with the largest eight wheeled engines built at the Locomotive Works, look like giants. The smokestacks and whistles had to be removed, in order to allow the engine to pass under the bridges, and there is some doubt as to whether they will pass under all the bridges with the cabs in position. The company are also building fifty of their largest eight-wheeled engines for the Milwaukee and St. Paul Railroad.

Fire in a Saw-Mill.

MOUNT FOREST, July 30.—Between four and five o'clock this morning a fire broke out in the large saw-mill owned by Messrs. Martin & Sons, of this town, and in a few minutes the entire building, including the stave, heading and lath mills, were in flames. The mill was situated about a mile from the town, rendering assistance impossible until the building, with all the machinery, was entirely consumed. Efforts were directed to saving the large quantity of lumber and shingles in the yard, but the flames spread with such rapidity that this was difficult. Quite a lot of lumber was burned, with five hundred bundles of shingles. The building and machinery was insured for about $4,500 in the Waterloo Mutual, Saugeen Mutual, and Union Insurance Companies. Estimated loss over $12,000.

SOME four or five millions of logs taken out in the Red Lake county in the United States, tributary to the Red River, are being floated down the latter stream to Winnipeg, where they have been sold to Canadian manufacturers of lumber.

BURDOCK BLOOD BITTERS cures all diseases of the blood, liver and kidneys, female complaints, nervous and general debility, and builds up the entire system when broken down by disease.

COMPARATIVE TABLE

SHOWING STOCK OF TIMBER AND DEALS IN LIVERPOOL ON JUNE 30TH, 1880 AND 1881, AND ALSO THE CONSUMPTION FOR THE MONTH OF JUNE, 1880 AND 1881.

	Stock, June 30th, 1880.	*Stock, June 30th 1881.*	*Consumption for the month of June, 1880.*	*Consumption for the month of June, 1881.*
Quebec Square Pine	211,000 ft.	421,000 ft.	47,000 ft.	158,000 ft.
" Waney Board	77,000 "	170,000 "		
St. John Pine	56,000 "	3,000 "	13,000 "	2,000 "
Other Ports Pine	10,000 "	39,000 "	2,000 "	9,000 "
Pitch Pine, hewn	451,000 "	757,000 "	173,000 "	96,000 "
" sawn	261,000 "	471,000 "	140,000 "	105,000 "
" planks	20,000 "	85,000 "	21,000 "	48,000 "
Red Pine	—	38,000 "	—	2,000 "
Dantzig, &c., Fir	302,000 "	124,000 "	121,000 "	72,000 "
Sweden and Norway Fir	2,000 "	9,000 "	1,000 "	—
Oak, Canadian	227,000 "	331,000 "	40,000 "	44,000 "
" Planks	—	142,000 "	—	36,000 "
" Baltic	44,000 "	90,000 "	8,000 "	6,000 "
Elm	19,000 "	27,000 "	2,000 "	—
Ash	1,000 "	8,000 "	—	2,000 "
Birch	84,000 "	100,000 "	55,000 "	23,000 "
Greenheart	91,000 "	48,000 "	6,000 "	8,000 "
East India Teak	59,000 "	8,000 "	20,000 "	—
Quebec Pine Deals	1,116 stds.	6,980 stds.	1,102 stds.	1,423 stds.
" Spruce "				
N. B. & N. S. Spruce Deals	11,892 "	13,658 "	7,127 "	7,143 "
" Pine "	1,179 "	879 "		
Baltic Deals	2,023 "	4,341 "	456 "	680 "
" Boards	870 "	300 "	125 "	100 "
" Flooring Boards	3,024 "	3,652 "	639 "	1,081 "

BOARD OF TRADE RETURNS.

An account of the wood imports into the United Kingdom during the month ended June 30th, 1881, and in the six months ended June 30th, 1881.

MONTH ENDED 30TH JUNE.

	QUANTITY.	VALUE.
Timber (Hewn).	*Loads.*	£
Russia	34,823	60,769
Sweeden and Norway	52,630	74,415
Germany	20,430	68,102
British North America	5,793	23,414
Other Countries	48,811	139,200
Total	162,487	365,900
Timber (Sawn or Split, Planed or Dressed.)		
Russia	52,282	104,758
Sweden and Norway	74,060	180,179
British North America	74,593	176,786
Other Countries	50,388	160,183
Total	251,323	621,906
Staves (all sizes)	7,429	38,004
Mahogany (tons)	1,923	16,461
Total of Hewn and Sawn	413,810	987,806

SIX MONTHS ENDED 30TH JUNE.

	QUANTITY.	VALUE.
Timber (Hewn).	*Loads.*	£
Russia	62,131	127,716
Sweden and Norway	249,403	364,982
Germany	92,023	293,586
British North America	11,018	45,902
Other Countries	294,427	865,543
Total	709,002	1,697,751
Timber (Sawn or Split, Planed or Dressed.)		
Russia	87,588	181,009
Sweden and Norway	275,614	657,838
British North America	127,456	303,943
Other Countries	194,368	631,543
Total	685,026	1,774,333
Staves (all sizes)	42,328	217,843
Mahogany (tons)	16,187	146,131
Total of Hewn and Sawn	1,394,028	3,472,084

WESTERN SUPPLIES.

The *Northwestern Lumberman*, of the 23rd July, gives what it believes to be a tolerable correct estimate of the relative supply of lumber in stock at the points named on the 1st of July, as follows s—

LUMBER ON HAND JULY 1.

District.	1881.	1880.
Mississippi Valley	708,117.963	596,728,202
Lake Michigan	587,741,329	584,346,419
E. Mich. and Lake Erie	554,800,000	497,930,000
Miscellaneous points	59,000,000	62,000,000
Total	1,909,659,292	1,741,004,162

The *Lumberman* then goes on to say :—It may surprise a good many to find that the Mississippi river district, which includes nearly all the interior Wisconsin points, with the exception of Oshkosh and Fond du Lac, shows an increase of 111,389,761 feet over the amount in pile at the same date last year. There is no real reason, however, why it should. It will be remembered, we presume, that the inventory taken on the first of January revealed the fact that there was then an excess in the stock as compared with that of the preceding year of 168,560,272 feet. It is true that the trade of this year has been larger than it was in 1880, but is it not also true that the production has been greater? We think it is, unquestionably. The mills were somewhat later in starting, but they escaped the reduction in their cut that was occasioned last year by the freshet, and no one will dispute that the time lost at the beginning of the season is not so valuable, and does not represent the same reduction in the product, as the same amount taken from it after the mills are fairly under way. Moreover, the mills this year have all been operated up to their capacity, and with the capacity materially greater than it was ever before, and with a log supply fully equal to it, we are justified in assuming that the net result up to the first instant in the way of lumber manufactured was considerably larger than it was a year ago, or, indeed, than it ever was before. On this ground we think the increase, large as it is, is susceptible of a simple and reasonable explanation. The fact that it is no greater becomes, when we consider it in the light of these circumstances, the best kind of evidence of a trade that has been active beyond any precedent lumbermen can bring forward. With an increased supply to begin the season with of 168,560,272 feet, and an increased production of an indefinite, but presumably very large amount, a difference in the stock July 1 of only 111,389,761 feet is remarkable, and proves beyond question that the demand for lumber for the first six months of the year was the greatest ever known.

The difference in the quantity of lumber manufactured this year and last was probably greater in the Mississippi valley than on Lake Michigan—though there has been some increase in the latter also—which accounts for the showing which a comparison of the totals in the last named district makes. In this, the total stock on hand is approximately the same as it was a year ago. We have here still stronger evidence of what the trade has been this season ; for there was 94,173,492 feet more lumber on hand to begin with than was available in 1880, and the production, taking the Chicago receipts as a criterion, was up to the middle of the year about sixteen per cent. greater than last season. If the business in this city may be regarded as fairly representing the trade of the whole district, which is not an unfair assumption, since the bulk of all the lumber produced therein reaches the consumer through the Chicago yards, we may say that the difference in the sales of the two years amounts to fully the percentage just named.

The increase in the total stock on hand is 168,654,671 feet. This is apparently large, though really very small, being in fact a gain of only a little more than ten per cent.

It is worth noticing that the percentage of increase in the stock, as compared with last year, was twenty-two and a fraction, January 1, or more than double what it was on the first of July. This is sufficient proof that the excess in the supply is not what it should be.

And in its issue of the 30th ult. the *Lumberman* has the following with regard to the

LOG SUPPLY :

District.	Secured.	Doubtful.	Hung up.
Mississippi Valley	1,899,000,500	189,000,000	116,000,000
Lake Superior	150,000,000	19,000,000	.....
Lake Michigan	1,865,500,000	111,000,000	40,000,000
Eastern Michigan	1,705,750,000	136,500,000	32,000,000
Wolf River	115,000,000	10,000,000	10,000,000
Total	5,735,450,000	466,000,000	198,000,000

The most noticeable feature of the foregoing statement is the smallness of the amount of logs hung up. According to the footings in the last table, there are only 198,000,000 feet of logs in all the streams enumerated, and only 466,000,000 feet that are regarded as doubtful. It is in respect to these two items that the *Lumberman* is inclined to question the accuracy of the reports, though it may be that the situation is exactly as they represent it to be. At all events, we shall not be very much surprised if at the end of the season it is reported that more logs are still back in the streams than the above tables show.

Absence of Trees on Prairies.

A curious and interesting explanation of the absence of trees on the great western prairies was given at the meeting of the Academy of National Sciences by Mr. Thomas Meehan. Numberless theories have been advanced by the students in natural history why the great feeding grounds of the buffalo should be without vegetation, the principle on which is supported by distinguished authors as being that of climatic influences. Mr. Meehan's theory is that the absence of trees is due to artificial causes altogether. Taught by their necessities, the early Indians made it a practice annually to fire the high grass of the prairies, which had the effect of making the growth more luxuriant and consequently more inviting to the vast herds of buffalo, on which the aborigines depended chiefly for sustenance. It has been conclusively settled that no vegetation, save the hardy prairie grass, will appear on ground over which fire has swept until another season, so that the yearly prairie fires extended the area of the plateau until they became almost measureless. Mr. Meehan cited several instances where trees have grown when the firing has been discontinued.

ZOPESA.—A healthy man never thinks of his stomach. The dyspeptic thinks of nothing else. Indigestion is a constant reminder. The wise man who finds himself suffering will spend a few cents for a bottle of *Zopesa*, from Brazil, the new and remarkable compound for clensing and toning the system, for assisting the Digestive apparatus and the Liver to properly perform their duties in assimilating food. Get a 10 cent sample of *Zopesa*, the new remedy, of your druggist. A few doses will surprise you.

A POSITIVE FACT.—It is now established beyond controversy that DR. FOWLER'S EXTRACT OF WILD STRAWBERRY is the most perfect cure for all forms of bowel complaints, including cholera morbus, dysentry, colic, cholera infantum, nausea, canker of the stomach and bowels, piles, etc. Beware of opiates and poisoning drugs, that only check for a time and produce inflammation. WILD STRAWBERRY is safe and certain in its effects.

Wrought Iron Shanty Cook Stoves

The Best Article ever offered to the Trade.

I have much pleasure in drawing attention to my **WROUGHT IRON COOKING STOVE, for Shanty, Hotel and Boarding House use.** These Stoves are made of **Heavy Sheet Iron**, the top and lining of the fire-box being of **Heauy Cast Metal** and all the connecting parts of substantial **Wrought Iron Work.** The dimensions of these Stoves are as follows :—

SINGLE OVEN STOVE

Top surface contains six 10-inch holes, with ample room between, and one oven 16 x 24 x 26.

DOUBLE OVEN STOVE

The Double Oven has a top surface containing twelve 10-inch pot holes, with two ovens, each 16 x 24 x 26. One fire-box of suitable size for area to be heated. Below will be found Testimonials from some of the leading Lumbermen, who have used my Wrought Iron Cook Stoves since I ommenced manufacturing them. They are the names of gentlemen who are well known and eliable, and will carry more weight than any recommendation of my own could do.

The Best Stove I have ever Used.

PETERBOROUGH, May 31, 1880.

ADAM HALL, Esq., Peterborough. Dear Sir,—I have used your Wrought Iron Cooking Stove in our lumbering operations since its introduction here, and have no hesitation in saying that I prefer it to any other. For durability, economy and efficiency, where a large number of men are employed, it is the best stove I have ever used. You can, with confidence, offer it to hotels, boarding houses and lumbermen.

Yours truly, THOS. GEO. HAZLITT.

The Stove for Lumbermen.

PETERBOROUGH, June 1st, 1880.

ADAM HALL, Esq., Peterborough. My Dear Sir,—We have used your Wrought Iron Cooking Stove and find it is very satisfactory for lumber operations, especially so on drives. We can recommend it highly.

Yours truly, IRWIN & BOYD,

Gives the Greatest Satisfaction.

PETERBOROUGH, June 3rd, 1880.

A. HALL, Peterborough. Dear Sir,—I have had the Wrought Iron Cook Stove, purchased from you, in constant use ever since last fall, and it gives the greatest satisfaction in every respect. I can recommend them highly to any one who is in the lumber business. Very truly yours, GEO. HILLIARD, M.P.

EVERY STOVE GUARANTEED

All the necessary TINWARE and CUTLERY for Shanties suppied at the Lowest Prices.

ADAM HALL, Peterborough.

OAK HALL

Nos. 115, 117, 119, 121, King St. East, Toronto.

We are the most Extensive CLOTHIERS in Canada.

We carry a STOCK of FIFTY THOUSAND DOLLARS to choose from.

We watch the interest of our Customers. Our stock is FULL of the very best goods in Scotch, English and Canadian Tweeds.

We BUY and SELL for Cash, therefore it enables us to do business on very SMALL PROFITS.

NOTE THE PRICES.

We give a Good Tweed Suit for.....$6 00
We give a Good Tweed Pants for..... 1 50
We give a Good Overalls for 0 35

LUMBERMEN!

When you visit Toronto, come direct to OAK HALL, and fit yourselves out with a Good Suit. Remember the address :—OAK HALL, the Great One Price Clothing House, Toronto, opposite St. Jame's Cathedral. 1yl13

STEAM SAW MILL OWNERS

Have your Boilers thoroughly Inspected and Insured against Explosion by

The Canadian Steam Users' Insurance Association

HEAD OFFICE, 9 VICTORIA STREET, TORONTO.

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HON. JNO. McMURRICH, Vice-Pres. A. F. JONES. Secretary-Treasurer. 1yl17

Travelling Agent.

MR. A. L. W. BEGG has been appointed agent for the CANADA LUMBERMAN, and is authorized to collect subscriptions and grant receipts therefor and to make contracts for advertisements appearing in its columns.

The Canada Lumberman

DEVOTED TO THE LUMBER AND TIMBER INTERESTS OF THE DOMINION.

PUBLISHED SEMI-MONTHLY BY

TOKER & Co. PETERBOROUGH.

Terms of Subscription :

One copy, one year, in advance	$2 00
One copy, six months, in advance	1 00

Advertising Rates :

Per line, for one year	$0 90
Per line, for six months	50
Per line, for three months	30
Per line, for first insertion	10
Per line, for each subsequent insertion to 3 mo's.	05
Cards not occupying more than 12 lines (1 inch) per annum	8 00
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Special rates will be made for page, half page and column advertisements.

Advertisements intended for insertion in any particular issue should reach the office of publication at least three clear days before the day of publication, to insure insertion.

All communications, orders and remittances should be addressed and made payable to TOKER & Co., Peterborough, Ont.

Communications intended for insertion in the CANADA LUMBERMAN, must be accompanied by the name of the writer, not necessarily for publication, but as a guarantee of good faith. Communications to insure insertion (if accepted) in the following number, should be in the hands of the publishers a week before the date of the next issue.

PETERBOROUGH, Ont. AUGUST 15, 1881.

THE *Ontario Gazette* contains a notice of an application for the incorporation of the "Severn Driving and Boom Co.," which will operate on certain streams in Muskoka and the County of Simcoe. The applicants are Hon. W. E. Dodge, Arthur M. Dodge, C. E. Dodge, of New York; J. S. Peckham, of Waubaushene; Henry S. Lovering, of Coldwater; and James Scott, of Waubaushene.

THE Society of Swedish Saw-mill Owners and Timber Exporters held a meeting at Hernosand on the 16th of the present month. The chief subjects discussed were the necessity for the continuation of the Guarantee Society, and assorting and classification of deals, &c., and other matters appertaining to the welfare and expedition of the Swedish saw-mill business. No hints appear to have been thrown out at this meeting as to what the production of Scandinavia for the English market is likely to be this season; but probably we shall have fuller details later on, in which some allusion to the subject will be made. —*Timber Trades Journal, July 23.*

A GRIEVANCE.

A cause of dissatisfaction has existed in the British provinces relative to the advantages which lumbermen of the United States have over British-American.

Lumbermen of the Republic enjoy the privilege, under Lord Ashburton's treaty, of exemption from all taxation of their lumber passing through British territory; this immunity is, as might be expected, abused.

The lumber is floated from American streams into Canadian, manufactured, and then shipped to the United States, and has not the duty of $2 per M. imposed on exports by Canadians. The worst of it is the lots are sometimes augmented by logs after being entered.

There exist more than one firm of Canadians, nominally headed by Americans, doing business in this way, to the demoralization of our trade. This feeling pertains chiefly to that portion of the Dominion mainly affected, namely, western New Brunswick and south-eastern Quebec; and it is felt that this old law should be modified so that American logs manufactured into lumber, &c., in Canada should be entered to the other side on the same terms as Canadian.

OTTAWA.

From Our Own Correspondent.

THE NEW CARGO REGULATIONS.

Owners of American boats are not well pleased with the enforcement of the custom laws in regard to the admission of lumber in bond into the States. They had been in the habit of carrying large loads and breaking bulk in order to get through the Champlain Canal readily, but now they are not allowed to lighten at the point named. The lumber yards at Whitehall are principally bonded ones, and the American law is that when a vessel clears from a foreign port, with freight for a port in the United States, it must arrive at its destination with the same quantity as specified in the clearance paper. The transferring of a portion of bonded lumber loads in the past has been a violation of the law, but was permitted by the American customs officials. A change has, however, come, and the law is to be enforced to the letter. The cause is not stated, but it is presumed that it is being done in order to prevent errors in keeping the record. After the bonds are given at Kanse's Point the bulk of any vessels cargo is not be broken in any way. Vessels have been in the habit of carrying from 150,000 to 175,000 feet of lumber each trip, but now in order to be able to get through the Champlain Canal, their cargoes will have to be reduced by about 25,000 feet per barge. The owners, therefore, cannot realize as much in each trip as formerly, but the probability is that freight rates may advance, although they have not done so as yet. The regulation applies to Canadian bottoms as well as American boats.

THE LUMBER BUSINESS.

Lumbermen decline to make any heavy sales at present, for two reasons. The price of lumber having advanced in the Western States has made the market in the east firmer, but no increase in price here is to be noted as yet. The principal reason, however, for the present cautiousness of the producer in making only limited sales is in the fact that there is a probability of a short lumber supply this season, owing to the slowness of logs coming down, caused by the lowness of water in the Ottawa. There are a good many logs stuck at various points, and the most of them may not be got down until the fall freshet sets in. There are about 100,000 logs for the Chaudiere Mills at the Chats Slides, head of Deschesnes Lake, thirty-five miles from this place, that can hardly be kept moving. The anticipation of mill owners was to cut about the same quantity of lumber this season as last, in which case the production would be about as follows :—

Firm.	*Feet.*
E. B. Eddy, Hull	50,000,000
E. B. Eddy, Deschesnes	30,000,000
Brouson & Weston	45,000,000
Perley & Pattee	40,000,000
J. R. Booth	35,000,000
Gilmour & Co., Hull	35,000,000
Gilmour & Co., Chelsea	35,000,000
Sherman, Lord & Hurdman, Hull	25,000,000
John Rochester	20,000,000
McLaren & Co., New Edinburgh	20,000,000
McClymont & Co., New Edinburgh	15,000,000
Capt. Young	17,000,000
Total	367,000,000

The two mills of Bronson & Weston have been running along day and night since the season opened, and has sawn up more lumber so far this season than any other firm. Mr. Booth had a large surplus of logs on hand for the start and is keeping within a good margin, so as not to have to shut down even for a day. Perley & Pattee are said to be running short of logs, and may have to shut down for a few days shortly.

In regard to quotations there is no material change, although the market is firmer. The following are current prices :—$12@14.50 ₱ M. for 10-inch stocks; $16@19.50 for 12-inch stocks; $20@30 for sidings; and $10@11.50 for shipping Lath rate as formerly—85 cents to $1 ₱ M.

RIVER TROUBLES.

The troubles between Boyd, Caldwell & Son, and Peter McLaren, both of Carleton Place, will be aired before the Supreme Court of Canada, a further appeal having been made. The Caldwells have been compelled to close down their mill for want of logs, the drive being stuck at and above High Falls. It is understood that they will enter an action for damages against Mr. McLaren for loss sustained in the logs being kept back. The law proceedings will cost a heavy sum before they are ended, but it will settle the question as to the right of streams. Both of the parties named control the timber limits on the Mississippi river, which flows into the Ottawa at Arnprior.

On the Kippewa river there is also trouble. T. & C. Smith and George Taggert threaten to destroy the dam erected by the owners of the Gordon creek limits, in which case there will be trouble between them and the interested parties.

LOGS AND TIMBER.

By the end of the present week it is expected that two millions of logs will have passed through the Quio boom, which is thirty miles above Ottawa. The exact quantity of logs coming down is not yet known, but there is quite a quantity stuck. On the York branch of the Madawaska the firm of Bronson & Weston, Ottawa, have a lot of 85,000 logs stuck, and these will be left until next spring.

It is expected that the last of the square timber passing down will get through the Chaudiere slides this week. About twelve or fifteen rafts will be laid up on the Upper Ottawa until the spring, owing to the lowness of the water. Sales at Quebec are reported at from 19 cents to as high as 35 cents per square foot for white pine; red pine, 17 to 25 cents.

EDGINGS.

McClymont & Co. are shipping lumber to Ogdensburg, by rail over the St. L. &. O. Railway, at the rate of five carloads a day.

So far this season Canadian barges have principally been engaged in carrying lumber to Quebec and Burlington at $2 ₱ M.

American bargemen have demanded an increase in freight rates to Albany and New York of 25 cents ₱ M. They claim that it does not pay them at $3 and $3.25 ₱ M. respectively, as they cannot carry so much as formerly, not only through the enforcement of the Customs' laws, but also through the lumber being green, and therefore heavier than last year's cut. They will likely get the advance asked for.

The freight business at this period last year was somewhat dull, as it usually is in the middle of the summer season, but this year is an exception to the rule. During the past couple of weeks the shipments have been as brisk as in the spring or fall.

SHIPMENTS OF LUMBER.

Lumber is being shipped over the Canadian Pacific railway from points along the line to Brockville at the rate of seventy carloads a week. Each car averages 10,000 feet. The following are the principal shippers: Caldwell & Son and Peter McLaren, Carleton Place; Dickson, Almonte; Foley, Pakenham; McLachlin Bros., Arnprior; Gillies Bros., Braeside and Sandpoint; W. R. Thistle & Co., Pembroke. The lumber is tranferred to boats at Brockville and sent to Oswego.

Several lumbermen have made application to the C. P. Occidental Railway Co. for shipment of square timber by rail to Quebec, but lack of flat cars prevented them from entering into such an engagement at present.

TRENTON.

From Our Own Correspondent.

GILMOUR'S NEW MILL.

TRENTON, August 5th.—Mr. Gilmour, of Gilmour's mills here, just returned from Michigan yesterday. I caught him at the mill a few hours after he came off the train, and had quite a long talk with him about lumbering matters. His loss on the mill burnt down lately here was very heavy. The mill and plant alone were worth $150,000. He was insured for $75,000 in ten several companies, but could only get $40,000. He says he is too anxious to build and proceed with his business to stop and invest more of his money in law suits; so he will go on. He will build again on the old site, and intends, he says, to beat the world on saw-milling this time. He saw much in Michigan that he will introduce, and also has new ideas of his own. He hopes to have all running in first-rate order by next spring. He is not doing much at present; just keeping a small temporary mill going.

DIFFICULTY WITH FOREST RANGER.

Mr. Gilmour was slightly wrathy at the action of the Forest Ranger, Mr. McWilliams, who had stopped several drives of logs up the Trent, alleging that the measurement was not correct, and that thereby a portion of the just dues would be avoided. Mr. Gilmour says that he must have a very vague notion of the cost of stopping a drive of logs, and that the action is unprecedented and high handed. On account of his mill not being in operation, it does not actually make a vast deal of difference to him, but if it were running, it would pay him to disregard the official interference till the logs were within his own booms. He alleges that he made Mr. McWilliams the following apparently very fair offer: That the doubtful logs should be marked with the Forest Ranger's private mark, and run into a boom by themselves. Then as they came up to be cut, in the mill, the Ranger could have a man measuring both each log and the amount of lumber it produced, and Mr. Gilmour could also have a man. Then correct measurements could be obtained. This offer was refused.

Mr. Gilmour says that anyhow the logs should have been measured in the woods, and that if there is any error it is the Ranger's own fault. It is not likely, he considers, that anything is wrong with the measurement, as his men make affidavit that it is correct.

LUMBERING AT ARNPRIOR.

During my conversation with Mr. Gilmour he told me some very interesting facts about the new mill Mr. McLaughlin is building at Arnprior. It will be, till his own is built, he says, ahead of anything of the kind in Canada. His engine is a very large 30×42-inch cylinder, with seven boilers. All the machinery is worked by live rollers and endless chain. They have several improvements in the machinery which no other mill in Canada can show. The machinery was almost all procured from Starr's, of Erie, Penn. The mill will run two large circulars and a gang. Mr. McLaughlin calculates the cost at from $60,000 to $65,000, but in Mr. Gilmour's estimation this is much below the mark.

FOREST FIRES

EAST SAGINAW, Aug. 7.—The greatest alarm now prevails as to the safety of this city should the course of the forest fires not be checked. On the Detroit and Bay City Railroad the fences on the neighboring farms are burned down, and the flames are spreading over the fields to the woods. The air is surcharged with smoke and burning cinders, and charred leaves are flying through the streets of the city. The rural population is out *en masse* fighting the approaching conflagration, and both sides of the track are ablaze. On Wednesday a train could not get into Ludington because of the heat. At Evart a railway bridge is in danger. At Freeland gangs of men are cutting down all that can afford fuel to the flames. The smoke in the town is blinding, and all are in a state of exceeding anxiety. All along the narrow gauge line between Mount Pleasant and Coleman is on fire, as is also the case on the Otter Lake Branch of the Flint and Pere Marquette road.

One large lumber yard, George Whitman's, with the house and barns and three head of cattle, has been utterly consumed in Freeland, Saginaw county, and there is every reason for fearing that Bagsley's and John Jaddin's families have been cut off, as they had no means of escape. The east half of Ogeman county is a sheet of flame, and the fire is bearing down on Tawas.

The drought at Bay City has been so intense that the crops have suffered beyond hope. The soil is baked and tillage is impossible. The corn is stunted and yellow, and the oats will hardly yield half a crop. The woods are a vast tinder-box, and forest fires are the rule on every side. Trains are delayed, sometimes entirely stopped. The woods in Midland will soon be non existent, and the falling white ash in Bay City resembles a snow storm, with the thermometer at 90°, and the sky a brilliant coppery yellow. The air is so sultry that breathing has become a difficult task, and the visitation exceeds that of 1871. Whole lumber camps have been burned out, and the men, who were out fighting the flames in a different direction, return to find their places of abode swept away, and all their belongings licked up by the unsparing fire fiend. The conflagration will cause a rise in the price of pine lands and in insurance rates. Only a constant deluge of rain for some days can check the progress of destruction.

ST. JOHN, N. B.

From Our Own Correspondent.

DEALS AND SHIPS.—Our fleet of ships in port has diminished considerably during the fortnight, and will doubtless assume still smaller proportions during the next few weeks, before the fall shipments commence; meantime our stock af deals will be increased to some extent. The deal market here is firm, owing in some measure to the recent favorable reports from the Liverpool market, though prices here are not quotably higher, the current value of country sawn deals being about $8.50 per M.

FREIGHTS.—It was intimated in our last that freights had reached their lowest point, which opinion has been fully confirmed, as rates have since advanced 3s. 9d. per Standard, several large ships having recently been placed at 55s. for Liverpool.

VESSELS IN PORT.—The following is a list of the square-rigged vessels in port, with their tonnage and destination :—

John Murphy, 1479, Liverpool.
Arklow, 748, Cork Quay.
Fidelia, 450, E. C. Ireland.
Emily Raymond, 290, Westport.
Regina, 1212, Liverpool.
St. Olaves, 571, B. Channel, or E. C. I.
Eos, 390, Bordeaux.
Colorado, 682, Dublin.
John Rutherford, 983, Dnblin.
Stella, 445, ——
Emily Lowther, 762, Sharpness.
Henry, 1095, Liverpool.
Golden Sea, 1418, London.
Susan L. Campbell, 727, London.
Rolf, 922, United Kingdom.
Torryburn, 448, ——
Julies Marie, 271, U. K. or Continent.
Missouri, 818, ——
Hants County, 641, ——
Asiana, 1193, Liverpool.
Brothers and Sisters, 656, Warren Point.
Naval Reserve, 1830, Liverpool.
B. Hilton, 986, ——
Sichem, 519, ——
Cleveland, 449, ——
St, John, 250, Bridgewater.

SHIPMENTS.—The shipments of deals and other sawn lumber are as as follows :—

For Europe	17,222,000	Sup. ft.
" United States	2,303,000	"
" Australia	788,000	"

St. John, N.B., Aug. 6.

From Another Correspondent.

THE WEATHER

here for the past week or ten days has been very disagreeable, foggy overcast and wet. A change of wind and slight clearing up yesterday enabled quite a number of vessels that were ready and waiting to get to sea, so that at the present writing our harbor is rather bare of shipping.

THE ENGLISH MARKET.

has shown a slight upward tendency, with indications that the rise is not merely temporary, but that shippers may look for fairly remunerative prices for their deals.

FREIGHTS

are, in consequence of the better news from the other side, slightly stiffening, and we hear of an offer of 52/6 being refused ; 53/9 was accepted by the same parties, and 55/ has since been paid. Coastwise freights remain firm, and with little r no change to advise.

THE AMERICAN MARKET

is in very fair condition, although we are aware of heavy shipments of lath to Boston from Bangor, which have dropped the price from $1.62½ to $1.55. The sound ports do not offer any better prices to speak of than Boston, and many shippers prefer the latter port in consequence of the difference in freights. New York advices show that cargoes of wide stuff of good lengths command ready sales, and laths are quoted at $1.65 to $1.75, according to quality. The fact that western lumber dealers have advanced their prices on certain lines will, we hope, have a beneficial effect upon our dealings with our friends in the neighboring Republic, for they are too good customers to be allowed to slip through our fingers for the want of proper management, and we flatter ourselves that we can supply them with our staple article in as great quantities, good quality, and at as reasonable a rate as it can be procured elsewhere.

St. John, N.B., Aug. 9.

McRAE'S sash and door factory at Trenton is filling a large order for Kingston.

AUCTION SALE

OF VALUABLE

Timber Limits,

Situated Near Lake Nipissing.

Notice is hereby given that (if not previously disposed of by private bargain) the following Valuable Timber Limits will be offered for sale at Public Auction in the

CITY OF OTTAWA,

ON

Thursday, the 22nd Day of September Next,

VIZ.:

	Sq. Miles.
Berth No. 23, on the River Bueve, near Lake Nipissing, comprising	36
Berth No. 43, on the River Wannapitac, near Lake Nipissing, comprising	36
Berth No. 51, on the River Wannapitac, near Lake Nipissing, comprising	36
In all	108

These limits contain, in the aggregate, a large quantity of magnificent pine timber.

Berth No. 23 is estimated—as the result of a recent exploration—to contain a quantity of trees sufficient to produce at least half a million cubic feet of square timber, besides two hundred and fifty thousand standard saw logs. The river is available for driving to Lake Nipissing.

There is a good mill site on the Bueve river, about three miles from Lake Nipissing.

Lumber could be transferred thence by water to the Callender station of the Canada Central Railway, the line of which is projected to pass directly through this limit.

Lumbermen and others desirous of acquiring limits are invited to examine these berths in the interval preceding the day of sale.

The owners reserve the right to dispose of either or all of them by private bargain in the meantime, and will be ready to consider any offers that may be made.

Terms of purchase will be liberal, and will be made known before the sale, the place and hour of which will be duly advertised.

Persons desiring further particulars are invited to communicate with the undersigned.

STEWART, CHRYSLER & GORMULLY,
Solicitors, Ottawa.

Ottawa, 28th July, 1881. 3L20

E. S. VINDIN,

Commission, Shipping, Forwarding and General Agent.

LUMBER MERCHANT

Office, Tempest's Block, Port Hope. L11

ONTARIO

FLEMING & SON

ELECTRO & STEREOTYPE

26 COLBORNE ST.

TORONTO FOUNDRY

We have added to our plant all the latest improved machinery for Electro and Stereotyping, and the manufacture of Printers Furniture, facilities for executing work which no other establishment in the Dominion possesses, and not excelled by any on the continent. A large assortment of various cuts constantly on hand.

FLEMING & SON,
26 Colborne St., Toronto.

L14

D. McLACHLAN & SONS,

Manufacturers of all Descriptions of

STEAM BOILERS.

SHIPS' WATER-TANKS. Repairing Punctually Attended to.

1y-L20 NORTH SLIP, ST. JOHN, NEW BRUNSWICK.

Northey's Steam Pump Works

BOILER FEED PUMPS, AIR AND CIRCULATING PUMPS, STEAM FIRE PUMPS, and WRECKING PUMPS.

MINING PUMPS, PUMPS SPECIALLY ADAPTED for OIL PIPE LINES, And CITY WATER WORKS.

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HAMILTON, ONTARIO.

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ELECTRICIAN,

4 QUEEN STREET EAST, TORONTO, ONTARIO.

Trusses for HERNIA, Rupture,

The most Durable and Beneficial kind known to Medical Science always in Stock, and fitted to the Body at Reasonable Prices.

BATTERIES FOR BATHS,

Of Special Sizes, made to order, both for Public and Private Use; and FARADIC BATTERIES always on hand. PRICES LOW. 1yL17

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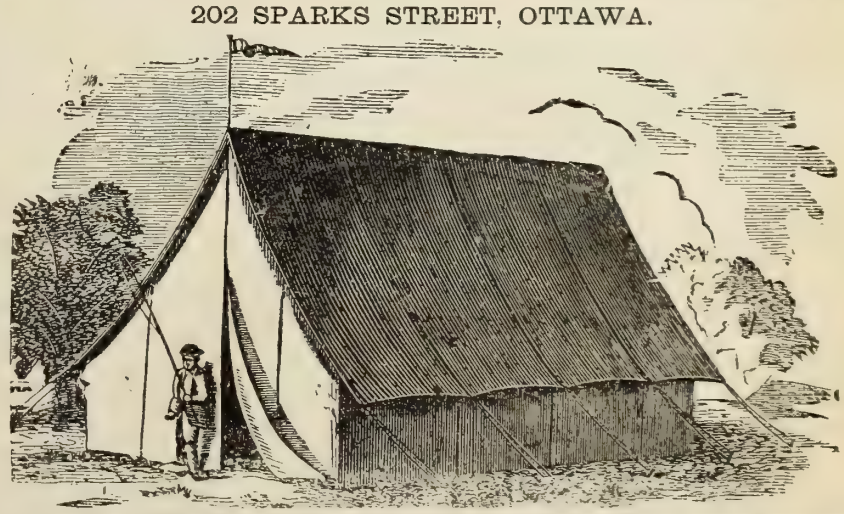
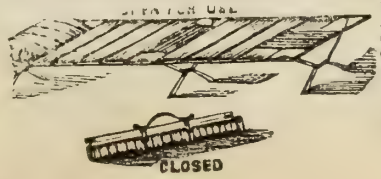
202 SPARKS STREET, OTTAWA.



anufacturers of Tents for Lumbermen, Sportsmen, Camp Meetings, Photographers, Lawn and ilitary Encampments, with or without extra roofs, all sizes and styles, white or fancy striped, ildew proof or plain. Prices from $5, upwards. Flags of all descriptions, (regulation sizes) made of the best of silk-finish bunting. CAMP BEDS (Bradley's Patent) the best bed ever invented; size when folded 2 x 6 in.; 3 feet long, weighing only 11 pounds, but strong enough to bear the weight of any man. Waterproof wagon and horse-covers, tarpaulins sheets, coats and leggings of every description made to order on the premises. Special rates to Lumbermen. Send for catalogue and price list to



NATIONAL MANUFACTURING CO.,
202 Sparks Street, Ottawa

b27

PETERBOROUGH.

SPERRY'S NEW SHINGLE MILL.

A few days ago a correspondent paid a visit to the new shingle mill of Mr. A. Sperry, which stands on the right bank of the Otonabee just above the locks. This establishment, which is one of the most perfect of its kind in the Province, was built last spring, and has been running but a few months. It has, however, turned out over three quarters of a million shingles in that time.

The mill itself is a two storey frame structure, 40 by 60 feet, with an engine-room wing on the south side, 25 by 35. A little bay running into the land is utilized for the purpose of holding logs for immediate consumption, and which would probably hold a drive of 2,000 logs. Further up the lake Mr. Sperry has other booms and enclosures sufficient to hold a whole summer's supply.

The machinery and appliances of this mill are all of the newest and most perfect kind. Beginning on the lower flat, the first feature is the huge engine—steam power is used alone, it being found necessary to burn up the waste sawdust and strippings. The engine is an Automatic Cut Off of seventy-five horse-power, with a driving wheel 8 feet in diameter, which, with a 16-inch double thick belt, drives the machinery. On the river side of the building is the slide, up which the logs are hauled by means of a strong chain winding round a shaft for the ordinary saw-mill principle. At the top of this slide, and but a few inches from it, is the crosscut "drag-saw," where the rough timber is cut into convenient lengths and shipped per the revolving "elevator" to the second storey. The only other object worthy of note on the lower flat are the "conveyers." These are used for carrying the sawdust and strippings to the engine. The coarser waste stuff is pressed into bundles and sold for kindling.

On the second storey are five circular saws in all, and the lengths of log brought up the "conveyor" are subjected to four processes before they are turned over to the packer. They are first stripped of bark with axes, then trimmed, that is, reduced to the proper length—18 inches. From the trimmer they are taken, unless very small, to the "splitter," a second circular saw, when they are turned over, divided into quarters, and taken to the shingle machine. The shingle machine in Mr. Sperry's establishment is a very ingenious American patent called the "Hall" machine. It is greatly used in Michigan though not much in vogue yet in this country. The slant of the shingle is caused by a "fet-work" attachment by means of which the block is planted outwards and inwards as each strip is cut off. From the shingle machine the strips pass to the hands of the "edgers." Here two circular saws, hard at work, keep up with the pan of the shingle machine. The edgers put the last finishing touches on the shingles before they go to the packers—cutting off any frayed or bad part. The packing process is performed by boys with what are called "binders," which exert, by means of a lever, a tremendous pressure on the centre of the bunch, so that the binding cross pieces can be firmly nailed with hoop iron.

The total capacity of the mill is 25,000 to 35,000 per day.

In reply to a question as to whether Peterborough was not rather far from the market, Mr. Sperry said no, he did not find it so. It was also very convenient to the point of supply. There is, he says, any amount of good timber for his purposes to be procured up the Otonabee.

The market for these shingles at present is Oswego. They are shipped at the mill on waggons to the Midland station, whence they are conveyed by rail to Port Hope and from that point per schooners to Oswego.

Mr. Sperry is going to add to his plant in the fall, and professes himself, so far, well satisfied with the success of his venture.

A FINE HARDWARE ESTABLISHMENT.

Peterborough has long been noted for having the finest stores, and its merchants for carrying the largest and best stocks to be found anywhere in the Province outside of Toronto, and it would seem that they now propose not only to outdo themselves, but eclipse the Queen city of the west. Quite recently Mr. George Stethem has fitted up and moved into premises which we venture to think constitute the largest and best retail hardware establishment to be found in the Province—certainly there is none in Toronto to equal it. The store proper is 22 feet wide by 135 feet deep, with, like nearly all the stores in Peterborough, plate glass windows. The interior arrangements are as nearly perfect as one can imagine possible for the extensive business which Mr. Stethem's untiring energy and close attention to the wants of his various customers, have succeeded in building up. Some idea of the extensive character of the stock which Mr. Stethem carries may be formed when we state that not only is the main shop more than fully occupied, but that a good sized outbuilding has also to be used, while the large cellar underneath contained at the time of our visit about 70 barrels of different kinds of oils, coils of rope, &c. The second story was also fully occupied with the lighter goods kept in stock. In addition to keeping an unusually large and varied stock of ordinary hardware, Mr. Stethem is the sole agent in Canada for the celebrated Wetmore axes and scythes, Jewell's oak-tanned leather belting and Rangoon machinery oils. Having been brought up to the business, and giving the wants of his lumbering, agricultural and manufacturing customers his undivided attention for years, it is clear that what Mr. Stethem does not know about his line of business is not worth knowing. His thorough acquaintance with the wholesale markets and his connection with the manufacturers, enables him to buy closer and sell as cheap as any and much cheaper than most of his competitors. Everyone visiting Peterborough should take a run through Mr. Stethem's establishment even though they do not require anything at the time, and they will then realize how ample his stock is for filling orders on the shortest possible notice.

BLACK WALNUT.

A GLOOMY OUTLOOK FOR FURNITURE MEN.

A few years ago black walnut was a drug on the market, and was not at all popular with furniture manufacturers and dealers, but recently it has been so universally sought for and used so extensively for almost every kind of furniture, that latterly it has become very scarce, and now it is found next to impossible to obtain a sufficient supply to meet the increased demand, at almost any cost. An idea of its scarcity and value may be gained, when $100 per thousand feet has been paid this year for the same quality and quantity of black walnut as could be purchased last year for $70. The rapidity at which the supply has decreased is owing to the impetus the trade has received through the organization of a large number of extensive furniture companies in the United States. The immense number of sewing machines (the wood-work of which has been manufactured from black walnut) that have been annually turned out both in the States and in Canada, is one of the principal causes of the rapid consumption. A prominent dealer in the city stated to a *Globe* reporter that there are now ten anxious buyers distributed throughout the States to every one there was two years ago, and that there is more difficulty in procuring a few thousand feet of the precious lumber now than there was in securing half a million feet three years ago. When walnut first came to be used, it was obtained in large quantities from Port Stanley, the Counties of Kent, Essex and south Middlesex, and it also grew in abundance on the banks of the Thames River, Ont.; but now the Canadian supply is exhausted, and lately it has been obtained from the State of Indiana. There was such a great similarity between the wood of the two countries that manufacturers had no choice, and paid the same price for either. Since the Canadian supply has failed the immense drain on the forests of the State of Indiana has caused the supply to give out there, and now the walnut (which is of a lighter shade and consequently not so good) is obtained from the States of Arkansas, Kentucky, Kansas and South Tennessee.

Mr. Hay, of Toronto, states that when he first came to Canada walnut was used for

RAIL FENCES.

The principal value of walnut is that it is an excellent wood for furnitnre and is handsome in appearance. It has a close grain, is not liable to be affected by changes of temperature, and at the same time is not hard to work, which renders it a very valuable timber economically. Another reason why it is so expensive is that it has to be hauled a great distance by teams before a railroad can be reached.

A SUBSTITUTE.

Butternut has been considered an excellent substitute for walnut, but as it can seldom be obtained without flaws, it will never fill the place of the time-honored walnut. Besides this it is also very scarce, and is gradually increasing in price.

Cherrywood, which is as enduring as walnut, and which has been rapidly growing in favor with furniture dealers, has doubled in price within the last two years on account of its scarcity.

THE REMEDY.

If walnut is not replanted at once, the outlook for good furniture in the future will be very dreary. If it were planted along the shores of Lake Erie or in the counties before mentioned, or in any part of the Province west of Ontario, in twenty years time it would pay 5,000 per cent., so says an old arboriculturist. In the meantime the prospect is gloomy in the extreme, and dealers look forward to a speedy and complete exhaustion of the supply.—*Globe.*

BUSH FIRES IN THE MICHIGAN PENINSULA.

There are fires in the woods along the entire route of the Jackson, Lansing and Saginaw railroad north of Kawkawlin, mostly light and smouldering, having burned out in many quarters without doing material damage to the timber, but at some points, where there had been lumbering operations last winter, or where there was considerable down timber, that which is standing has been so much affected that it will have to be lumbered during the coming winter. A strong wind coming from a different quarter than that which has prevailed for the past week would, unless we are favored with a heavy and general fall of rain throughout the burning district, result in immense damage to the timber in many quarters. As an experienced lumberman remarked, it seems as if there was a little fire on every section.

Standing upon Bald Hill, on the Manistee, a well known elevation in town 27, north of range 4 west, extensive fires can be seen both to the east and west. From Portage Lake, in town 26 north, range 4 west, heavy fires may be seen to the east, and immediately about the lake fires have swept through a considerable portion of the forest, doing much damage. Fires may be also seen both east and west from Grayling, on the Jackson, Lonsing and Saginaw railroad, and one started up on Saturday in the immediate vicinity of that village, which threatened serious results, but was checked before it had made any considerable progress.

A fire was started on the Methodist camp grounds on Higgins' Lake last week by the men engaged in clearing up the premises, and it spread all through their twenty acre tract down into the lumber camps on the line of the Roscommon road, near the lake, and only by the hardest kind of work were the buildings saved. It spread also through considerable of the timber in the vicinity, is still burning, and a change of wind might make it decidedly warm for the sojourners, both at Saginaw and Burrows encampments, they having been already materially discommoded by the dense smoke, which for a week past has hung over that entire section.

Fires, seemingly in the heavy timber, could be seen on Saturday a long way to the east of Cheeney, and at points all along the line from there to Terry Station; in some cases remote, in others in the immediate vicinity of the track, as at St. Helens, where the down timber in the marsh just beside the line is all burning up. There are fires at all points, and there is smoke everywhere. A good drenching rain would at this time be worth millions to the timber interest, as well as to all other interests in the lower peninsula of Michigan.—*Bay City Call.*

DR. FOWLER'S EXTRACT OF WILD STRAWBERRY cures all forms of bowel complaints in infants or adults. The most safe, pleasant and perfect remedy known. Purely vegetable and free from opiates or poisonous drugs.

BRITISH TRADE NOTES.

THE agents for one of the largest productions in the Baltic, we hear, have now received notice not to make any further sales just yet, as some doubts are entertained whether any further quantity can be delivered this year in addition to what is already contracted for. We understand the prices made by the stock in question—which was one of the first in the market to sell—compare most favorably with those now ruling.

WE are pleased to learn that arrangements have lately been made between a house in Glasgow and a Canadian mill for a regular supply of pine doors and mouldings, this being a branch of the Dominion trade which we hope to see greatly developed.

WE are informed that a largish parcel of Swedish lower Gulf whitewood battens was sold last week to a Hull firm, at £5 per standard, that had previously been offered unsuccessfully in the same neighborhood earlier in the year at £4 15s. This sale, we understand, cleared out the agent's stock for present shipment.

IT is stated that the Continental demand has absorbed a good portion of the north of Europe stocks for f.o.w., and that the Colonial demand (including Australia and the Cape) has been unusually brisk this season. It is reported also that a much larger number of Swedish and Norwegian sailing vessels are taking wood to the north of France and other of the nearer ports of Europe this season than they have done heretofore. Most of these little ships, it seems, instead of calling at the coal ports to coal, proceed immediately after discharging the wood back to the Baltic in ballast. This relieves the freight market here of a good deal of tonnage.

STOCKS of spars here are low, though prices continue somewhat weak; in comparison, however, they still show an improvement on those of last year. The sluggishness in the revival of these goods is partly attributable to the fact of their being much more come-at-able now than they used formerly to be, owing to the number of steamers engaged in the trade, which kept the port open during the winter, and render the chance of the market being run out very remote. Christiania are offering freely on the other side, and Petersburg are coming forward now, which will assist in keeping prices of this description from rising. The talk of a shortage on the supplies earlier in the season is hardly borne out in the result, and they seem to be forthcoming from somewhere as soon as ever there is an inquiry for them.

THE LAW IN NEW YORK.

The following law regarding the disposal of mill refuse, &c., has recently come into force in the State of New York, and will be of interest to all mill owners:—

CHAPTER 430.

AN ACT to amend chapter five hundred and thirty-four of the Laws of eighteen hundred and seventy-nine, entitled "An Act for the prevention of moose, wild deer, birds, fish and other game." Passed May 28, 1881; three-fifts being present.

The people of the State of New York, represented in Senate and Assembly, do enact as follows:—

SECTION 1. Section twenty-five of chapter five hundred and thirty-four of the Laws of eighteen hundred and seventy-nine, entitled "An Act for the preservation of moose, wild deer, birds, fish and other game," is hereby amended so to read as follows:

SECTION 25. No person, association, company or corporation shall throw or deposit, or permit to be thrown or deposited, any dye stuff, coal tar, refuse from gas houses, sawdust, lime or other deleterious substance, or cause the same to run or flow into or upon any of the rivers, lakes, ponds, streams, or any of the bays or inlets adjoining the Atlantic Ocean within the limits of this State. Any person who shall violate this section, or any member of any such company, association or corporation who shall authorize and direct any such violation, shall be guilty of a misdemeanor, and in addition thereto shall be liable to a penalty of fifty dollars for each offense. But this section shall not apply to streams of flowing or tide water, nor to the town of French Creek in Chautauqua County, which constitutes the motive power of the machinery or manufacturing establishments, *when it is absolutely necessary for the manufacturing purposes carried on in such establishments to run the refuse matter and material thereof into such stream.*

IF YOU ARE SUFFERING with a cold do not fail to try HAGYARD'S PECTORAL BALSAM; it is daily relieving its hundreds throughout our Dominion. It is pleasant and palatable.

Chips.

A CHICAGO tug captain has invented a machine to unload lumber from vessels by steam, which the Captain says, will do the work at a cost of 12½ cents per thousand feet.

THE firm of E. Walsh & Co., lumberers and storekeepers at Bear River, N. S., has failed. The assets are almost all covered by a bill of sale, and unsecured creditors fare badly.

A TRAMWAY fifteen miles in length connects the port of Rockingham, in Western Australia, where vessels of 1,000 tons can approach close to the shore, with the great timber location of the Jarrahdale Timber Company.

THERE is not a single wooden sailing ship now laid up for sale in the Wearmouth Dock which has seldom been without several since the Crimean war. The old sailing ships have been nearly all bought by foreigners, mainly Norwegians.

IT is no great length of time since it was the custom of merchants at Liverpool, when measuring spruce deals, to make allowances for defective wood. It may, however, be now noted as being one of the "new order of things," that the practice has died out of existence.

"A THOROUGHLY posted lumberman" predicts that the available pine timber of Michigan suitable for lumbering will be used up in five years at the present rate of cutting in the Saginaw valley. One who does not profess to be thoroughly posted, predicts that the "thoroughly posted lumberman" will be cutting a good deal of lumber on the Saginaw river ten years from now.

THE Union Forwarding Company, which tows logs for the lumberers on the upper branches of the Ottawa river, tried to raise its rates about 50 per cent., and is accused of attempting to "arbitrarily monopolize" the towing. The result is that, as the Pembroke *Observer* says, Captain John Murphy, late of the Union Forwarding Company has signed a contract with the Chaudiere lumbermen to tow all their logs on the Upper Ottawa for the next eight years. We understand he will at once commence the construction of several propellers, to be placed on the various lakes to do the work.

THE London *Iron Trade Exchange*, of recent date, publishes a complete list of blast furnaces in and out of blast in the United Kingdom. From the returns it appears that out of the total 943 furnaces built, 563 are in blast and 380 are standing. There are probably 40 furnaces in various districts which are not included in the returns, but none of these have been in blast for many years, and they will never be re-lighted; others are dismantled, and some have never been completed. The returns from Derbyshire were imperfect, and the figures relating to that district may not be quite accurate, but as regards other districts the figures, says the *Exchange*, may be relied on.

IT is reported that cork trees have been successfully cultivated near Milledgeville, Ga., and that on some of them the bark is already thick enough for use. The trees have grown from the acorns of the Spanish oak, which were planted several years ago. The soil and climate of Georgia seem to be well adapted to the cultivation of this tree, and it is said that little doubt remains but that it can be profitably grown. Probably in other portions of the South the conditions are equally favorable, in which case the cultivation of cork need not be limited to one district, or even one State.

JAMES WALKER & Co.'s mill at Orono, Me., is spoken of as the largest in New England. The saw-mill proper is 65×450 feet, well supplied with improved machinery; then there is a building 64×68, used for the manufacture of short lumber, boxes and shingles. The capacity of the mill is 150,000 feet daily, and 250 men are employed. The precautions against fire are more than ordinary, there being a large force pump at each end of the mill and one in the middle. No dust and cobwebs, which are frequent causes of fire, are allowed to gather on the beams and underside of the roof.

DR. FOWLER'S EXTRACT OF WILD STRAWBERRY cures summer complaints, diarhœa, dysentry, cholera morbus, cholera infantum, sour stomach, colic, nausea, vomiting, canker, piles, leucorrhœa, and all manner of flaxes

LIVERPOOL.

The *Timber Trades Journal* of July 23 says:—The arrivals of timber-laden vessels continue to be upon a very moderate scale, especially from Quebec, New Brunswick and Nova Scotia, and this is a matter for gratification, since our market, though firm at present, is in a sensitive condition, and will readily yield under any pressure to sell.

Fair progress seems to be made with the car goes of Quebec goods recently arrived, the very stiff position of the timber market in Canada having no doubt considerable influence over purchasers. Whether the high prices demanded by the lumbermen can be maintained remains to be seen, but by latest advices they appear to be under no apprehension of the future, and are very firm at the quotations. These are, however, so wide from the prices that can be obtained in this country that there is very little doing in the way of shipments to England, notwithstanding the low rates of freight now current.

LIVERPOOL TIMBER SALES.

On the 20th instant Messrs. Alfred Dobell & Co. offered one cargo of sawn pitch pine timber, deals, &c., and the balance of an old cargo, both of which were cleared up at fair prices, although the purchasers present were limited to local dealers. The prices realized were for—

16 in. and upwards deep	18d.	per ft.
16×12 to 15 in.	17½d.	"
15×13 " 14 "	17½d.	"
14×14 "	17½d.	"
12to14 "	16d. to 16¾d.	"
9"12 "	14¾d." 15½d.	"
6 to 8 in.×7 to 12 "	13d. " 13½d.	"

After which Messrs. A. F. & D. Mackay offered 312 logs of New Brunswick birch, withdrawn from their sale of Friday last. There was no disposition to buy, and lot after lot was withdrawn without a bid; eventually one lot of 13-inch wood was sold at 12d. per ft.

What an Albany Man Said.

One of the lumber dealers in Michigan has for the past three years been supplying a dealer at Albany. For the first year everything went well, but at length the Albany man began to complain. He found shortage and culls in every car load sent him and demanded discounts therefor, and this spring it was impossible to please him. No matter how carefully lumber and shingles were culled and billed here he was sure to write back that they were not up to the standard. Two weeks ago a car-load of "star" shingles was sent him. The "star shingle beats anything made in the country, and they know it at Albany as well as in Michigan, but as soon as the car arrived the dealer replied that he really must protest. The shingles were hardly "clear butts," and he could not unload the car until assured of a discount of twenty-five cents per thousand.

The Michigander had suffered long, but the end was nigh. He had inspected every bunch of shingles on that car, and he made up his mind to go to Albany and inspect them over again. The dealer there had never seen him, and the Wolverine walked into his office as a would-be purchaser of some extra fine shingles.

"I've got exactly what you want," promptly replied the Albanian. "I've got a carload of Michigan 'stars' out here which lay over any shingles you ever saw."

"Are they all perfect?"

"Every one of them."

"No culls in the centre of the bunches?"

"I'll eat every cull you find. I got them from a Michigander who is as straight as the Ten Commandments, and he has never yet sent me a stick of second-class stuff. Come and see 'em."

The Wolverine quietly pulled out his business card and laid it on the desk.

The dealer took it up, read the name, and sat down on a stool with a queer feeling in his knees.

There was an awful silence as they glared at each other, and it was a full minute before the victim slowly extended his hand and hoarsely whispered:—

"Did you ever see a man make such an infernal ass of himself? Shake!"—*Detroit Free Press.*

"Temper is everything," and in the pens of the Esterbrook Steel Pen Company the temper will be found all that is to be desired.

J. K. POST & CO.
LUMBER MERCHANTS
And Shipping Agents.
OSWEGO, N. Y.
L12-1y

Flexible Board Rules,
With Steel Head, either Cleveland or London make, at $1.75 Each.
GEORGE STETHEM,
PETERBOROUGH, L16

S. S. MUTTON & Co.,
Wholesale Lumber Dealers
TORONTO.
We have for Sale a large quantity of PINE, OAK, WHITEWOOD, ASH, CHESTNUT, CHERRY, BUTTERNUT, BASSWOOD, &c.
☞P.S.—Also on hand 120 M dry Oak 2 to 4 inches thick, will be sold cheap to close it out. 1yL16

JAMES HADEDN,
MANUFACTURER OF
Shingles and Dressed Stuff.
Foxmead, P. O., County of Simcoe, Ont.
Two Planers for sale or exchange for a Boiler. b26

P. FREYSENG & CO.
PROPRIETORS OF THE
Dominion Cork Cutting Co
BY IMPROVED MACHINERY.
☞All kinds of Corks in stock and Cut to Order. Corks & Life Preservers a Specialty. Corkwood, Tinfoil, Capsules, Wire, &c.
71 Jarvis Street, TORONTO. 6L16

A. L. UNDERWOOD
WHOLESALE DEALER IN
White Pine, Basswood & Hardwood,
82 King Street East,
TORONTO, ONT.
1yL16

J. G. EDWARDS
HARDWARE MERCHANT,
LINDSAY.
BELTING, FILES, BABBIT METAL, CHAINS, ROPE, and LUMBERING SUPPLIES.
1y L17

SAMUEL WINDRIM,
MANUFACTURER OF
Agricultural Implements, Etc
MILLBROOK, ONTARIO.
HAVING DISPENSED WITH THE SERVICES OF AGENTS, I take this opportunity to bring to the notice of intending purchasers of Reaping Machines, that I have now on hand a quantity of the Celebrated
HANLAN REAPER,
which has NEVER BEEN BEATEN YET, and am prepared to allow the Agents commission—FIFTEEN PER CENT—on all purchases. L17tf

Penetanguishene Foundry
AND
MACHINE SHOP
CRAIG & CAMERON, Proprietors.
The undersigned beg to announce to the public that they are prepared to make all kinds of **Mill and Steamboat Brass and Iron Castings.**
All kinds of PLOW CASTINGS kept on hand. Plow Points and Landsides a specialty.
We have first-class machinery and are prepared to do all kinds of TURNING or PLANING on short notice.
We hope by strict attention to business and moderate charges, to merit a share of the public patronage.
☞All work guaranteed.
G. A. CRAIG.
C. CAMERON.
1yL17

SALE BY TENDER
OF EXTENSIVE STEAM
Saw-Milling Property
AT
Parry Harbour, Georgian Bay, and Valuable Timber Limits in the Parry Sound District.
The SAW-MILL is complete in its appointment, and has a cutting capacity of 80,000 to 100,000 feet per day of twelve hours.
The LIMITS cover an area of 229 square miles in the Townships of Monteith, Humphrey, Christie, Ferguson, Hagerman, McKellar, Spence, and Shawanaga, besides the purchased rights to cut the timber from numerous lots in the same Townships, and contain a large quantity of standing pine.
The whole establishment is in complete condition and active operation, and is excellently situated for the manufacture, sale and shipment of timber.
Tenders for the whole property, including plant, will be received until the 20th August next, addressed to the General Manager, Ontario Bank, Toronto, by whom terms of payment and any further information will be furnished on application. No tender will be accepted unless satisfactory to the vendors. 4L17

IRWIN & BOYD
Commission
Lumber Dealers,
FORWARDERS,
Shipping and General Agents
PORT HOPE.

Market Reports.

MONTREAL.

From Our Own Correspondent.

AUGUST 10.—The exports of lumber since the date of our last report (18th July) were as follows:—To London, 4577 pieces and 108,800 feet oak and 39,858 deals; Buenos Ayres, 1,234,715 feet; Montevido, 361,800 feet; Rosario, 289,258 feet; Liverpool, 42,777 deals; Glasgow, 15,000 feet. The exports to the River Plate are much in excess this year over last. The total shipments there since the opening of navigation till the 9th instant were 3,022,024 feet, against 2,007,103 feet for the corresponding period of 1880, being an increase of 1,014,921 feet. The rates of freight to the River Plate range from $13@16, according to the size of the vessel. Rates to Britain are about 60s. with an easy market, owing to the difficulty ships have experienced in procuring grain cargoes, and shipping is expected to continue brisk during the season.

The demand for building lumber has fallen off somewhat, builders being for the most part supplied, but lumber for repairs is in very good demand. We give the following as the yard prices in the city:—

Pine, 1st quality, ₱ M.	$32 00@40 00
Pine, 2nd " ₱ M.	18 00@24 00
Pine, shipping culls, ₱ M.	12 00@15 00
Pine, cull deals, ₱ M.	8 00@10 00
Pine, mill culls, ₱ M.	5 00@ 6 50
Spruce, ₱ M.	8 00@10 00
Hemlock, ₱ M.	8 00@00 00
Ash, run of long culls out, ₱ M.	16 00@18 00
Bass, " ₱ M.	14 00@16 00
Oak, ₱ M.	35 00@45 00
Birch, ₱ M.	17 00@20 00
Hard Maple, ₱ M.	18 00@25 00
Lath, ₱ M.	1 25@ 1 30
Shingles, 1st, ₱ M.	3 00@ 0 00
Shingles, 2nd, ₱ M.	2 00@ 0 00

BOSTON.

AUGUST 1.—The *Journal of Commerce* says:—There are no specially new features to report, and the demand remains fully up to expectations. The call for pine has been remarkably good, and in fact for all kinds of dimension stock dealers report a large consumption. Arrivals have been liberal, but the continuous demand has tended to prevent any accumulations. The supply of Western and Canada pine is small, and this fact (coupled with the recent advance made by dealers at productive points) indicates a prospective advance in this market. Southern pine is moving actively, with the supply sufficient to meet present wants at least. Spruce is rather weak, owing to large accumulations. Of the hard woods, oak is apparently the easiest, and a prime article can be bought for $40, with a possibility of an offer of $38 not being refused. Ash is quiet. Cherry has been arriving freely and is in good supply. Black walnut is in good demand and firm, with prospects of a further advance in prices. The following are carload quotations:—

CANADA PINE.

Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
" " 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

OSWEGO, N.Y.

AUGUST 1.—The following are the quotations:

Three uppers	$42 00@45 00
Pickings	32 00@35 00
Fine, common and dressing	20 00@25 00
Common	14 00@18 00
Culls	11 00@13 00
Mill run lots	17 00@22 00
Sidings, selected, 1, 1¼ inch	30 00@37 00
Mill run, 1x10, 12 in	16 00@21 00
Selected	20 00@25 00
Strips, 1 and 1¼ inch mill run	14 00@18 00
" " " culls	10 00@13 00
1x6 selected for clapboards	25 00@40 00
Shingles, XXX, 18 inch, pine	3 75@ 3 90
XX, " "	2 75@ 2 90
XXX, 18 inch, cedar	3 00@ 3 25
XX, " "	2 25@ 2 40
Lath	1 40@ 1 40

Since the advance at Albany trade here has improved and a feeling among the dealers that present prices will now be maintained to the end of the season, an increase in the receipts may be expected, as the new cut is about in condition to be moved. Canal and lake freights are steady, the supply being in excess of the demand.

IF YOU ARE SUFFERING with a cold do not fail to try HAGYARD'S PECTORAL BALSAM; it is daily relieving its hundreds throughout our Dominion. It is pleasant and palatable.

NEW YORK.

AUGUST 6.—The *Real Estate Record* says:—The situation does not vary greatly from last week. On most grades of stock the demand is only fair, and buyers moving with some caution, while prices tend to ease off somewhat from extremes, but there is no general downward tendency, and sellers in all cases refrain from urging the sale of desirable goods. Current consumption is full, but supplied by parcels coming in on contract, and while dealers want all the stock offering, they have a slight advantage which is naturally made the most of. The export trade has been a little unsettled for a week or two, and, in some instances, it would be necessary to offer a concession in order to secure the attention of shippers. Sellers, however, are not much troubled over the situation, and calculate upon winding the year up with quite as large a volume of exports as shown at the opening.

Eastern spruce is in fair stock, and there is not much inclination to make further important additions at the moment. Demand in consequence is somewhat slow, and offerings of random cargoes have to be handled with some care, though not much actual weakness has thus far been shown on really attractive stock. Specials meet with demand for fall delivery and manufacturers adhere to full rates on any outside or ordinary cutting. For an operating basis about $13@15 ₱ M. may now be quoted, and $17 the average top for specials.

White pine retains a firm position, and notwithstanding the accumulating stocks holders are very confident. Home wants continue full and not likely to shrink much, while the prospect for export demand is considered excellent in every respect. It is claimed that a great many shipping orders formerly filled at the eastward must have come here as the only point at which desirable stock can be reached. At primary points the "talk" is very firm, and some of our operators are purchasing at the full rates asked. We quote $17@19 ₱ M. for West India shipping boards; $24.50@26 for South American do.; $16@16.50 for box boards; $17@17.50 for do. wide and sound do.

Yellow pine has had a few ups and downs of demand, but as a rule dealers express themselves satisfied with the amount of business doing, and the market shows quite as good, if not better, position than usual for the season. Quite a number of specifications have been accepted on accounts ranging frsm 100,000 up to 500,000 feet, and at about former rates. There is some tendency to advance the cost of freight from one or two points. Randoms are not much wanted, and would be difficult to sell except at a shading. We quote random cargoes at about $24@26 ₱ M.; ordered cargoes, $26@28 do.; green flooring boards, $24.50@26.50 do.; and dry do do., $27,-@29. Cargoes at the South, $15@19 ₱ M. for rough, and $20@24 for dressed.

Hardwoods in good demand for choice seasoned stock and at full rates, the market ruling quite firm throughout, though it is intimated that "indications" from primary points are a shade easier in some instances. We quote at wholesale rates by carload about as follows:—Walnut, $77@85 ₱ M.; ash, $35@38 do.; oak, $40@45 do.; maple, $30@35; chestnut, 1st and 2nd, $30@35 do.; do. culls, $18@20 do.: cherry, $50@55 do.; white wood, ½ and ⅝-inch, $25@27.-50, and do. inch, $33@35 do.; hickory, $35@45 do. for Western, and $65@75 for good nearby stock.

Shingles sell well enough to prevent any great accumulation of supply, and prices are supported all around. The stock is only fair. We quote Cypress at about $6 for saps and $8.50@9 for hearts; pine shipping stocks, $4 for 18-inch, and Eastern saw grades at $2.50@4.50 for 16-inch, as to quality and to quantity. Machine dressed cedar shingles quoted as follows:—For 30-inch, $16@22.25 for A and $28.75@33.35 for No. 1; for 24-inch, $6.50@16 for A and $16.75 @23 for No. 1; for 20-inch, $5@10.50 for A and $11.24@11.75 for No. 1.

Be Wise and Happy.

If you will stop all your extravagant and wrong notions in doctoring yourself and families with expensive doctors or humbug cure-alls, that do harm always, and use only nature's simple remedies for all your ailments—you will be wise, well and happy, and save great expense. The greatest remedy for this, the great, wise and good will tell you, is Hop Bitters—rely on it.—*Press.*

CHICAGO.

AUGUST 3.—So far as the records show, there has been no material difference in the movement of lumber for the past week, as compared with the one preceeding. The general tenor of our reports indicates than an active demand prevails, and that the sales of lumber are large and numerous. We do not think there is evidence of any particular increase in the volume of business doing over the average for July, which, as is now well known, was the largest for that month on record, though some of our correspondents assert that the trade in the markets from which they write is so active that it severely taxes the capacity of the dealers to keep up with it. The notable absence of complaints in regard to the present business may be accepted as pretty good evidence that it maintains its activity, as lumber dealers everywhere have become accustomed, this season, to a rushing demand, and they would be very apt to notice an unfavorable change in it. On the whole, the *Lumberman* is inclined to regard the situation of the lumber trade as in most respects eminently satisfactory.

Some doubt has been expressed hitherto in regard to the effect of the rapid advance in prices this season upon the buyers of lumber in the country, and some have even gone so far as to definitely predict a marked falling off in the quantity of lumber consumed in consequence of its increased cost. It will be noticed that in a number of our reports this week reference is made to this point. It is evident that in some markets the operators think they observe that the demand has been checked slightly by the repeated changes in the list, though in the majority of cases it seems to be the fact that the advance in prices has made no difference with orders. There is not enough in these statements to warrant the assumption that a dangerous falling off will result from the higher price of lumber. It may deter some who have had building enterprises in mind from immediately undertaking them, but not, we feel sure, to an extent sufficient to make a difference in the volume of trade. Those who have already begun building, or who have determined to do so, will hardly be kept from carrying out their plans by the slight difference the higher price of lumber would make in the cost of their improvements. In a general way the rise in the price of building material may have the effect to make some people defer their operations until what appears to them a more convenient season, but we do not regard this probability as of sufficient importance to make it a source of apprehension to lumbermen. It is a matter of fact that more building is done when prices are high than when they are pretty well down towards the bottom, from which it may safely be inferred that there is not much danger of trade being cut off in consequence of any increase in the cost of lumber, or any other material that is essential to the construction of buildings.

We have to note again a considerable advance in prices, the action of the dealers at this point last week having brought forth the usual crop of changes. For the most part, competing markets follow promptly Chicago's lead, but in some instances the necessary advance is made with some reluctance, the operators evidently fearing that it will have the effect to check trade. With a rising market it is of course to be expected that lumber will be firm, and generally speaking, no doubt it is so; but, possibly, where the dealers fancy that they may be losing some orders in consequence of the high prices, figures may occasionally be made that are not put down in the list. It is not to be supposed, however, that much of this sort of thing is doing, or that it will produce any noticeable effect upon the established rates. The average dealer in lumber, particularly if he has a stock of that article in his possession, is too firmly convinced that it is worth a good deal more than it cost him, whatever that may be, to part with it at much of a discount from the quoted rates.

The outlook for trade remains as favorable as ever. The demand promises to keep up, and there is therefore every reason to anticipate the continued firmness of prices. Whether the latter will be advanced still more is a problem. There is likely to be a temporary lull in the upward movement at present, but we have no means of knowing how long it will last.

Piece stuff has declined from twenty-five to fifty cents from the figures ruling last week, for all lengths under twenty feet, inferior being now quotable at $11.50, and good at $11.75. Longer stuff maintains its value rather better, and the prices obtained for it are covered by the range given a week ago. Cargoes running largely to this kind of stock are generally sold on their merits, the demand for long-length dimension being such as to warrant the sellers in asking more in proportion for it than they get for ordinary stock. Inch lumber is considerably lower than it has been, some grades having declined as much as $2 from the former prices. No. 2 Muskegon stock has been sold, it is said, as low as $11.25, and ranges now from that price to $13. Other grades are also lower than they have been lately, and everything is more or less weak. The probability is that in many transactions the actual prices obtained are lower than sellers care to make public, so that it is difficult to print quotations that represent the market accurately. The demand for shingles has not been sharp enough to keep up the price to last week's range, and we are compelled to note a decline of five cents per thousand, the present rates being $2.75@2.80 and $2.90@2.95 for Standard and Extra A respectively. It is claimed that the market for shingles is a trifle stronger than it was a few days ago, and the commission men hope to get along without making further concessions. Lath are steady at the old figures.

There is some difference of opinion as to what the immediate future of the cargo market will be, sellers, even, being by no means of one mind in regard to it. Some assert there belief that it will speedily recover its tone, while others give expression to the fear that the present weakness will last pretty well through this month. It must be admitted that there is considerable uncertainty about the course it will take, and under the circumstances one opinion is as likely to prove correct as another.

Lake freights are unchanged, but weak at the rates quoted below:—

CARGO QUOTATIONS.

Joist and scantling, green, ordinary lengths	$11 50@11 75
Joist and scantling, green, 20 feet and over	14 00@16 00
Mill run, choice green	16 50@21 00
Mill run, medium, green	13 50@16 50
Mill run, common, "	11 25@13 00
Shingles, standard	2 75@ 2 80
Shingles, extra A	2 85@ 2 95
Lath	1 80@ 1 85

LAKE FREIGHTS.

Manistee	$2 12½
Muskegon	1 62½
Ludington	1 87½
Grand Haven	1 62½
Menominee	2 12½
Sturgeon Bay	2 12½
White Lake	1 75
Ford River	2 00

Receipts and shipments of lumber and shingles for the week ending August 2:

	RECEIPTS.		SHIPMENTS.	
	Lumber.	Shingles.	Lumber.	Shingles.
1881	59,348,000	23,825,000	55,862,000	6,299,000
1880	51,872,000	18,638,000	30,442,000	2,822,000

Receipts and shipments of lumber and shingles from January 1 to and including Aug. 2:

	RECEIPTS.		SHIPMENTS.	
	Lumber.	Shingles.	Lumber.	Shingles.
1881	862,222,000	362,111,000	936,928,000	77,292,000
1880	711,082,000	328,265,000	787,430,000	58,428,000

TONAWANDA.

AUGUST 1.—Trade is very brisk. Dealers report heavy sales at good prices. Prices have advanced in consequence of an increased demand and largely by reason of the rise at Chicago and Saginaw. Appended find corrected price list, indicating an advance in several grades.

CARGO LOTS—SAGINAW INSPECTION.

Three uppers	$38 00@43 00
Common	17 50@20 00
Culls	11 50@12 50

BUFFALO.

AUGUST 1.—Trade is good and prices fair. We have not noticed any falling off in trade, owing to the advance in prices. The retail dealers are in buoyant spirits. The following are the latest quotaions for cargo lots:—

Uppers	$40 00@50 00
Common	17 00@20 00
Culls	13 00@14 00
Dressing stocks	18 00@20 00
Dressing sidings,	17 00@19 00

America was discovered by Lief Ericcson the Icelander, in the year 1004, and 856 years after, the Esterbrook Steel Pen Co., turned out their first pen.

ALBANY.

AUGUST 2.—The *Argus* has the following:—The most important movement in the district since our last report was fully set forth in yesterday's *Argus*, in giving the action of the trade on Monday, in which every house we believe participated, advancing the quotations of pine lumber, viz., $1.00 ℔ M. feet on common; $2.00 ℔ M. feet on intermediate grades, and $3.00 ℔ M. feet on uppers and inspected pickings, and pretty generally through the list. This is no sensational movement, but is taken by the trade in self-defense. Until yesterday pine lumber on dock at the Saginaw mills was, when the trade there would consent to name a price, bringing as much money as at Albany. At present writing the Saginaw holders of lumber refuse to name a price for their stocks, not for the want of any logs, nor from any lack of demand, but the largely and steadily increasing trade renders present and future values there, as here, uncertain. In Canada the lack of water has hung up so many logs on the streams that lumber is in light supply at shipping points. Whether this state of things is to continue much longer, until it will be too late to change the present aspect of things is, of course, uncertain; but throughout the Dominion, as on the Saginaw, all kinds of lumber are bringing and are held at much higher figures than were current in the winter. The sales here last week included the following round lots of common box at the then ruling prices: 1,500,000 feet, 1,700,000 feet, 1,000,000 and 500,000 feet; 600,000 feet various grades on p. t. To-day the market has a very healthy aspect; a sale was made early of 1,400,000 feet common box, we presume, at the advanced prices. We do not think there is any material addition to stock.

Hardwoods are steady and firm.

The stock of coarse lumber is getting very light; the demand is good at unchanged prices, but the trade here is cautious as to accepting orders in the present uncertainty of getting stock from the Northern mills, whence the report is dry! dry!

Shingles are in demand at quotations.

The receipts of lumber by lake at Buffalo for the week ending August 1st were 9,887,000 feet, and by rail 103 cars. The receipts by lake at Oswego for the week were 7,044,800 feet.

The receipts by canal at Albany from the opening of navigation to August 1st were:

	Bds. & Sctl.,ft.	Shingles,m.	Timber,ft.	Staves,lbs.
1881	171,173,060	860	.....	2,287,000
1830	175,020,800	974	5,400	257,000

River freights are steady:

To New York, ℔ M ft.	$ @1 00
To Bridgeport	@1 37½
To New Haven	@1 37½
To Providence, Fall River and Newport	2 00@2 25
To Pawtucket	2 25@2 50
To Norwalk	1 25@1 30
To Hartford	@2 00
To Norwich	@2 00
To Middletown	@1 75
To New London	@1 75
To Philadelphia	@2 00

Quotations at the yards are as follows:—

Pine, clear, ℔ M	$53 00@63 00
Pine, fourths	48 00@58 00
Pine, selects	43 00@53 00
Pine, good box	15 00@30 00
Pine, 10-in. plank, each	00 38@00 42
Pine, 10-in. plank, culls, each	00 00@00 22
Pine boards, 10-in	00 26@28 00
Pine, 10-in. boards, culls	00 18@00 19
Pine, 10-in. boards, 16 ft., ℔ M	25 00@30 00
Pine, 12-in. boards, 16 ft	25 00@30 00
Pine, 12-in. boards, 13 ft	28 00@30 00
Pine, 1¼ in. siding, select	40 00@42 00
Pine, 1¼-in. siding, common	16 00@19 00
Pine, 1-in. siding, select	40 00@42 00
Pine, inch siding, common	16 00@19 00
Spruce, boards, each	00 00@00 16
Spruce, plonk, 1½-in., each	00 00@00 20
Spruce, plank, 2-in., each	00 00@00 30
Spruce, wall strips, each	00 11@00 12
Hemlock, boards, each	00 00@00 13
Hemlock, joist, 4x6, each	00 00@00 31
Hemlock, joist, 2½x4, each	00 00@00 13
Hemlock, wall strips, 2x4, each	00 00@00 10
Ash, good, ℔ M	38 00@45 00
Ash, second quality, ℔ M	25 00@30 00
Cherry, good, ℔ M	60 00@70 00
Cherry, common, ℔ M	25 00@35 00
Oak, good, ℔ M	38 00@43 00
Oak, second quality, ℔ M	20 00@25 00
Basswood, ℔ M	25 00@28 00
Hickory, ℔ M	36 00@40 00
Maple, Canada, ℔ M	26 00@30 00
Maple, American, per M	25 00@28 00
Chestnut, ℔ M	35 00@40 00
Shingles, shaved, pine, ℔ M	0 00@ 6 25
" 2nd quality	0 00@ 5 00
" extra, sawed, pine	0 00@ 4 40
" clear, "	0 00@ 3 30
" cedar, mixed	0 00@ 4 00
" cedar, XXX	0 00@ 3 25
" hemlock	0 00@ 2 25
Lath, hemlock, ℔ M	0 00@ 1 50
Lath, spruce, "	0 00@ 1 75
Lath, pine, "	0 00@ 2 00

MINNEAPOLIS.

The *Mississippi Valley Lumberman* of the 5th instant says:—The weather of the past three weeks has been particularly favorable for drying lumber, and a very large part of the early sawing is now ready for shipment and is being sent away as fast as cars can be had upon which to load it. There is no cessation to the demand, and all manufacturers are burdened with orders. The recent advance has had no perceptable influence on trade anywhere. The fact that the wheat harvests are now almost beyond the reach of blight or damage of any kind inspires confidence and gives a firmness to prices. The want of cars is becoming an exciting topic with all classes of business men in the north-west, as the volume of traffic has passed entirely beyond all the railroad capacity for handling. There has been a regular blockade in the shipping yards of Minneapolis during the last few weeks, owing to want of room and cars, to which trouble the railway employees added a strike, which practically suspended business last week and led to a general public movement for relief. We estimate that Minneapolis is 15,000,000 feet behind in shipments.

News from all western markets indicate a perfect willingness to follow Chicago up on prices as often as she chooses to move, and all agree that the demand is beyond precedent and present facilities for doing business. The notable event in the north-west is the apparent success of the movement to organize the lumbermen's association, as we consider this an assurance of harmony which will secure steady uniform prices for lumber throughout the north-west.

DULUTH.

AUGUST 1.—Prices remain unchanged, but with an upward tendency. The advance in manufacturers' prices has apparently not affected the retailers, who have put up their own as much, and in some cases more, than has been done in this market. Along the Northern Pacific railway building continues brisk, and the demand for lumber good.

Treatment for Ringbone.

Ringbone consists of inflammation of the joint of the foot and deposit of bony matter just above the coronet and above or below (or both) the pastern joint. In the end the bony matter covers the joint and renders it immovable. The treatment of a newly-formed ringbone consists in giving the animal rest; use a high or low-heeled shoe, as the case may need, and as the horse walks on the toe or heel. To reduce the heat and inflammation, apply cold water with wet bandages, and when this has been effected, apply a blister made of 20 grains of corrosive sublimate and camphor, 10 drops of muriatic acid, and one ounce of oil of turpentine. When the blister is formed the part is washed and greased with lard. If this is of no avail, firing may be used with benefit, especially with a young horse. One ounce of hypo-sulphite of soda may be given daily for two weeks to remove any rheumatic tendency.

As the result of observation, and from the testimony of trustworthy men, the following is about the average growth in twelve years of the leading desirable varieties of timber when planted in belts or groves and cultivated:—White maple, one foot in diameter and thirty feet high; ashleaf maple or box-elder, one foot in diameter, and twenty feet high; white willow, one and one-half feet in diameter and fifty feet high; yellow willow, one and one-half feet in diameter and thirty-five feet high; Lombardy poplar, ten inches in diameter and forty feet high; blue and white ash, ten inches in diameter and twenty-five feet high; black walnut and butternut, ten inches in diameter and twenty feet high.

AT Taylor's mill, Gravenhurst, on Tuesday Mr. Wm. Clute, who was engaged at the trimming saw, by some means had his hand thrown against one of the saws, lacerating the back of the hand to some extent.

No Good Preaching.

No man can do a good job of work, preach a good sermon, try a law suit well, doctor a patient, or write a good article when he feels miserable and dull, with sluggish brain and unsteady nerves, and none should make the attempt in such a condition when it can be so easily and cheaply removed by a little Hop Bitters.—*Albany Times.*

Mr. TAIT'S new mill, Gravenhurst, is now in thorough working order, and is turning out about 30,000 feet of lumber per day. We noticed this week a new shingle machine on its way to the mill. Mr. Tait intends to manufacture shingles and lath as well as lumber.

A BARGAIN—GRIST AND SAW MILL FOR SALE, paying 12 per cent. clear; price $9,000; and above percentage guaranteed. Apply to

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FOR SALE.

150	Mlls. White Pine,	1 x 10	Stock.
175	" do	1 x 12	"
11	" do	2 x 10	"
20	" do	2 x 12	"
140	" do	1 inch	Siding.
20	" do	1¼	"
40	" do	2 x 10	Joists.
16	" Cedar,	3 x 6	"
19	" Basswood,	1¼ inch.	

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Medal and Diploma.....Centennial Exhibition, 1876
International Medal and Diploma, Sydney, Australia, 1877

WE RECEIVED

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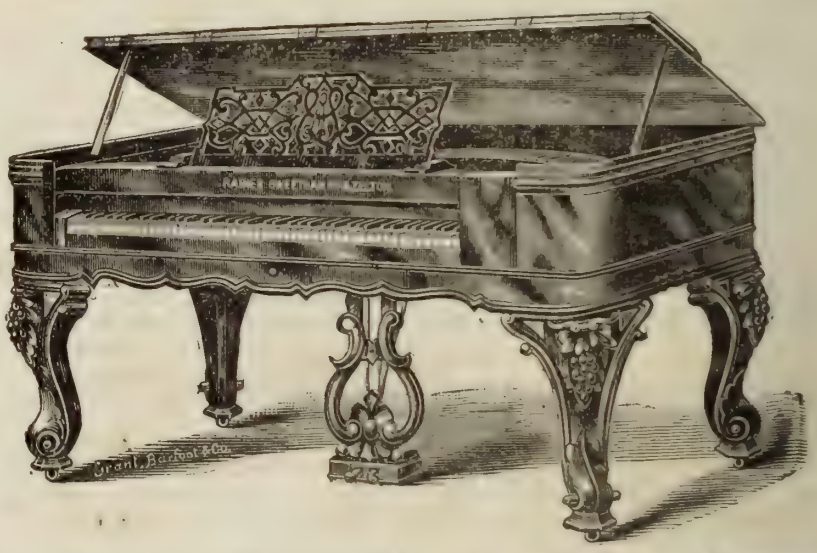

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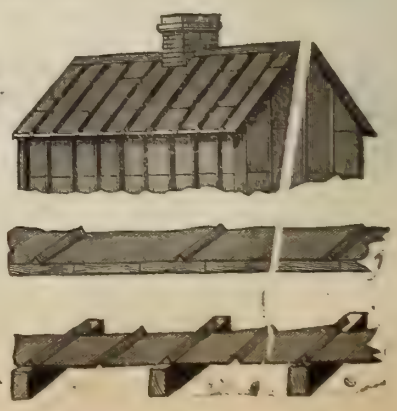

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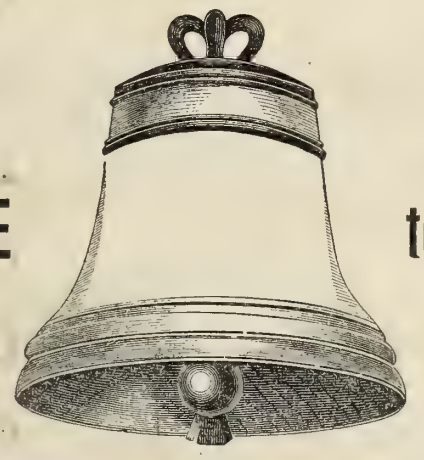

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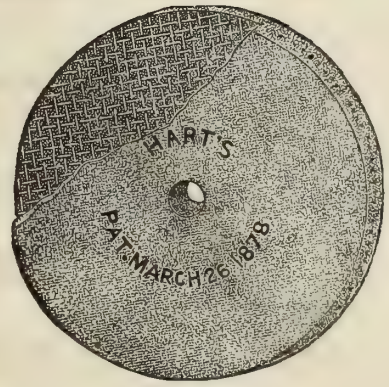

And Specially Adapted For Saw Gumming

Neither Animal nor Vegetable Glue or Gum being used in their composition, they are NOT LIABLE TO HEAT, and give out no Odors, while

They Surpass All Other Wheels for Free Cutting and Durability.

We refer to the following well known Saw Manufacturers for Opinions as to the Quality of our Wheels :

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M. Covel's Latest Improved Automatic Saw Sharpener!

Is the Most Perfect Machine that has ever been Introduced into Mills for that purpose.

CIRCULAR SAW STEAM FEED!

I would also call special attention to my

Heavy Circular Saw Mills

and for STEAM MILLS, would recommend the Steam Feed, having put in several which are giving the best of satisfaction, as will be seen by the following testimonials:—

GRAVENHURST, August 20th, 1880.

WM. HAMILTON, ESQ., Peterborough.

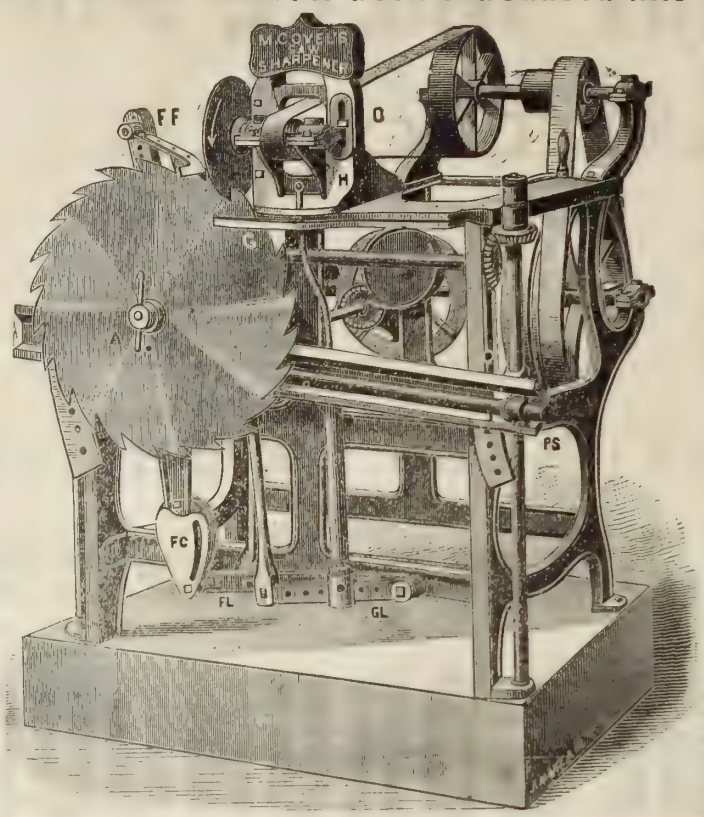
DEAR SIR—I have used your Steam Feed for near four months, and it has given me perfect satisfaction in every way; it is admitted by every person who has seen it work to be the best feed ever invented. Since I put it into my mill, I have not lost ten minutes time fixing anything belonging to it. I can cut 18 boards 13 ft. long in one minute. It can do much smoother and better work than the pinion feed. It is easily governed and reverses the carriages instantly. I am thoroughly satisfied with it and can recommend it to any person who has a Circular Saw Mill for cutting long or short logs. I consider I have cut more lumber than will pay for the Steam Feed since I got it than I would have cut had I not put it in.

Yours respectfully,
WILLIAM TAIT,
Lumberman, Gravenhurst.

TORONTO, August 11th, 1880.

WM. HAMILTON, Peterborough, Ont.

DEAR SIR—The Steam Feed you put in is working splendidly. Yours, &c.,
THOMPSON, SMITH & SON.

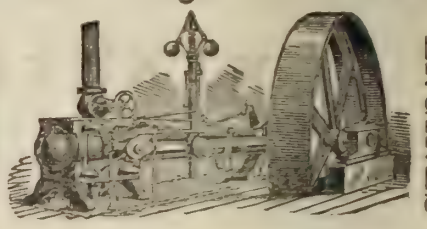


MILL MACHINERY!

I am also manufacturing Saw Mill Machinery, for all sizes of Gang or Circular Mills, Span or Double Circulars for Slabbing Small Logs. My Patent Jack Chain for drawing logs into Saw Mills, acknowledged by all to be the Cheapest and best ever got up; also, my Patent Lumber Markers, different sizes of Edgers, Gang Lath Mills, Trimmers, Power Gummers, and all Machinery used in a first class Gang or Circular Saw Mill; also, small Hand Gummers for use in the woods, for Cross-cut Saws. Rotary Pumps of different sizes, for Fire Protection in Mills, &c.

Horizontal Engines and Boilers

CORLISS ENGINES



Where economy of fuel is the great consideration, along with uniformity of speed, such as is required in Grist and Flouring Mills, Woollen and Cotton Factories, or large Factories of any kind, I supply the Corliss Engine. I feel justified in saying that our Style, Workmanship and Finish on this Engine will be no discredit to its renown, and certainly is not equalled in this country for economy of fuel. I have them working at 2¼ pounds of coal per horse-power per hour. L10

WILLIAM HAMILTON,

PETERBOROUGH, ONT.

EMERY WHEELS FOR SAW GUMMING!

Solid Emery Wheels are now almost in universal use for the purpose of gulleting and gumming saws. Statistics show from 25,000 to 30,000 saw-mills in the United States. Many of these run only a single saw each. A one-saw mill would use one or two wheels a year, costing $3 to $1 each, and when such small mills order single Emery Wheels from the factory, the express charges often equal the cost of the wheel. There was a time when the quality of Emery Wheels was so uncertain, and the demand so fickle, that storekeepers could not afford to carry them in stock. Now, however, Saw Gumming Wheels have become as staple an article as Files, and every dealer in saws, Hardware and Mill Supplies can afford to carry a few dozen standard sizes in stock. Large dealers order stocks of $500 to $750 worth at a time. Saw Gumming Wheels are used with the edge (or face) square, round, or beveled. Probably seven-eigths of all in use are beveled.

The principal sizes are:

8x¼, 8x⅜, 8x½ } ⅜ in. hole. 10x¼, 10x⅜, 10x½, 10x⅝ } ⅜ in. hole. 12x¼, 12x⅜, 12x½, 12x⅝, 12x¾, 12x⅞ } Holes, ⅜, ⅞ and 1 inch.

Probably more wheels 12x⅜, 12x½ and 12x¼ are used than all the other sizes together. Saw Gumming Wheels are used, however, of all sizes up to 24x1½. The most frequent complaint is that Emery Wheels harden the saw so that a file won't touch it. The answer is that you don't want a file to touch it. An expert workman will shape and sharpen the teeth with an Emery Wheel, leaving the teeth *case hardened*, in which condition the saw will cut about 33⅓ per cent. more lumber than a soft saw will. Those who want to use the file, however, have only to touch the saw *lightly* a second time (after going all over it once), and this second touch will cut through the case-hardened scale.

A QUESTION OF QUALITY.

Thirteen years of experience as makers of, dealers in, and actual users of Emery Wheels, have led us to a decided opinion as to what quality is the best. We prefer for almost every use an "Extra Soft" wheel like the "Pocono." We believe that money lost through the rapid wear of the wheel is more than made up by the money saved on wages. As we cannot get every one to adopt our views, we make several qualities, so as to meet their views. We say to those who think they can only be satisfied with some other make of wheels (not Tanite), that we can furnish qualities *to match* any and every other make. If you have got used to some special quality of wheel, let us know what it is, and we can send you *a Tanite Wheel of similar quality*. Our *regular* classification of Saw Gumming Wheels is as follows:

CLASS 2. MEDIUM—HARD.—This Wheel is THE STANDARD Saw Gumming Wheel all over the world. Probably seven-eighths of all the Saw Gumming Wheels used are "Class 2." It cuts fast and keeps its shape well. Some think it too hard, some too soft. We prefer the "Pocono."

CLASS 3. MEDIUM—SOFT.—The same as to coarseness and fineness as "Class 2," but a *softer*, and therefor freer cutting wheel.

CLASS "POCONO." EXTRA SOFT.—This Wheel we prefer to all others. It is both *finer* in grain and softer than either of the above. As a Saw Gumming Wheel, Class "Pocono" is specially suited to those practical and experienced Sawyers who know how to grind with a light touch, and who want a free cutting wheel that will not create much heat.

Illustrated Circulars and Catalogue, showing Cuts of Saw Gumming Machines, and Shapes, Sizes and Prices of Wheels, sent free on application.

L13

The Tanite Co. Stroudsburg, Monroe Co. Pennsylvania

CANADIAN TRADE SPECIALLY SOLICITED.

PUBLISHED SEMI-MONTHLY.

The only Newspaper devoted to the Lumber and Timber Industries published in Canada.

SUBSCRIPTION $2.00 PER ANNUM.

VOL. 1. PETERBOROUGH, ONT., SEPTEMBER 1, 1881. NO. 21.

A DESPATCH from Buffalo, dated August 11th, says :—"At a joint meeting of the Buffalo and Tonawanda Lumber Exchanges held here today, it was resolved to advance the prices of pine lumber $1 per thousand feet on all grades below shelving, and $2 on shelving and higher grades. The established terms hereafter will be 60 days, or 1½ per cent. off for cash."

THE fire in Bronson's lumber piles on the morning of August 16th is believed to have most satisfactorily settled the problem whether a fire in that locality could be extinguished. Great satisfaction is expressed among mill owners. Bronsons & Weston gave a checque for $100 to the benevolent fund of the fire brigade in ackowledgment of their services. The loss will not exceed $1,000.

A BOSTON furniture factory is making some chairs and tables from oak logs taken from a bridge in Germany. They have been in the water since the year 780, and are consequently about 1,100 years old. The logs are in a remarkable fine state of preservation, and they show no sign of decay after penetrating two inches below the surface. The color is a sort of brownish-gray, the fibres are fine and close, giving to the wood evidence of being capable of high polish. The logs were imported by a gentleman, for whom the furniture will be made.

THE *Jeffersonian* of Stroudsberg, Pa., has just been shown the certificate of award—which, by the way, is a magnificent specimen of the engraver's art—and a beautiful bronze medal, issued to "The Tanite Co., of Stroudsburg, Pa.," by "The Sydney International Exhibition" of New South Wales, Australia, forwarded to T. Dunkin Paret, Esq., President of the Tanite Co., by the commissioners for the United States, appointed by the Government of New South Wales. A similar award, similarly obtained, was not long since forwarded to the Company from the recent International Exposition of Geneva, Switzerland. The emery wheels of this company have obtained world-wide renown.

A LEADING match-splint manufacturer of Canada is authority for the statement that there are about twenty-two match factories in the United States and Canada, and that the daily production—and consequent daily consumption—is about 25,000 gross per day. In each gross of matches manufactured there are 144 boxes, so that the 25,000 gross produces 3,600,000 boxes. Each box made in the United States, where a duty of one cent upon every box of matches is levied, contains 100 matches, so that the number of matches produced and used daily amounts to 360,000,000. Counting that it takes a second to light each match, to light the 360,000,000 would take just that number of seconds. This gives 6,000,000 minutes, or 100,000 hours. In days of twenty-four hours each, it figures up to 4,166⅔, and gives eleven years and five months, with a couple of days extra as the time occupied during every twenty-four hours, by the people of North America—not figuring on the Mexicans—in striking matches. Figuring a little further it gives 4,159 years time in each year.

THE increase in the value of the Michigan forests within the last dozen years is probably unprecedented in the annals of the lumber trade. Twelve years ago, a man with a few thousand dollars to invest, bought a tract of land in Menominee county, Michigan, from the United States for $1.25 per acre. Wednesday he sold 2,875 acres of pine timber from the same section to a Chicago lumber firm for $25 per acre, reserving the land for himself. The investment has therefore paid a profit of over $68,000 on the 2,875 acres in only twelve years, the original investment being less than $3,600, and, as the land is worth something, "the returns are not all in yet."

THE Stanton (Mich.) *Clipper* has recently instituted an investigation into the pine resources of Montcalm county, the result of which is stated in the following paragraph :—"It says that its success in obtaining exact figures was only partial, but believes that the estimates given may be relied upon as very close to the actual facts : Day township has 7,000 acres ; Cato, 1,000 acres ; Perris, 1,560 acres ; Belvidere, 1,000 acres ; Home, 7,920 acres ; Douglas, 1,920 acres ; Pine, 640 acres ; Evergreen, 1,920 acres ; Crystal, 4,000 acres ; Richland, 5,000 acres ; Sidney, 1,040—making a total of 33,000 acres of pine in the country that has never been cut over. The quality on an average is very good, and it will cut according to the best estimates we have been able to obtain, about 792,000,000 feet of lumber. This, of course, is exclusive of a vast amount of pine that has been cut over once or twice, leaving a quantity of good lumber and shingle timber. There are probably also small tracts of good pine that have not been reported to us, but the above approximates very nearly the quantity of standing pine yet remaining to be cut in Montcalm county. At the present rate of manufacturing it, our timber will be entirely used up within the next five years, except perhaps a few tracts that men of means and foresight may hold for the higher prices that are sure to come. In the same five years, at the rate at which clearing has been going on and improvements are being made, good, well-improved farms will have sprung up to take the place of the pine, and the transition from a lumbering district to a fine farming country will hardly have been noticed ; yet the two conditions of the country will be so close together that they will stand out in bold relief.'

THE PREDICTED TIMBER FAMINE.

In a recent issue, the *Leffel Mechanical News* makes some very sensible remarks on this subject.

Regarding the supply of pine timber in this country, says the *News*, its rapid disappearance, and the prospect of its speedy exhaustion, we gave a few weeks since some figures which are not a little alarming, but are believed to be entirely authentic. It does not add to the cheerfulness of the situation to know that in the matter of our resources of oak and walnut lumber we are no better off. Both these woods, but especially the former, are of such vast utility in our manufacturing industries that they have been justly considered indispensible, and no theory has ever been formed, so far as we are aware, of the means by which their loss could be made good. But it is daily becoming more apparent that the problem will, at no remote period, imperatively demand solution, and that one of two alternatives must be chosen ; either the production of these varieties of timber must be stimulated, or substitutes be found which will answer in their place.

So far as oak is concerned, the case is not yet so desperate but that economy in its use, and above all an immediate check to its needless destruction, may be a sufficient remedy, at least for the needs of the present generation. The insane propensity for clearing land, whether it is useful for agriculture or not, and whether the timber is to be turned to any account or not, ought to be restrained by a penal statute. It is carried in some instances to such an extent that nothing short of a deliberate purpose to impoverish the country, to bring droughts and hurricanes, to "sow the wind and reap the whirlwind," can explain the conduct of the landowners. Individual freedom is so much prized by our people that a restraining law on this subject would probably be difficult of enforcement ; but agricultural societies, granges, farmers' clubs, and public journals of whatever class, can do very much in this behalf by disseminating the facts and bestowing wholesome advice on this vitally important subject.

The market for walnut lumber has already been seriously affected by the approaching scarcity. A "corner" has even been attempted by a few particularly shrewd dealers ; and manufacturers of furniture are considering what course they shall adopt when the time comes in which they can no longer, even at a heavy advance, obtain this much desired material. Nothing else is so well adapted to the purposes for which it is used ; and even of the unsatisfactory substitutes proposed, the supply is not to be depended on. Mahogany will take its place to some extent, but the tendency here also is to increasing scarcity, as the trade is destructive to the vessels engaged in it, owing to the stormy latitudes which they are compelled to visit. The gum tree is also recommended, and as a material for veneers is found to be nearly equal to rosewood, free from shrinkage, and taking an admirable finish. Beech, birch and red oak have been resorted to in many cases, and will necessarily be used more and more frequently as the coveted walnut becomes higher in price.

The true remedy, after all, is to make good the deficiency, not by seeking poor and unsatisfactory substitutes, but by producing as fast as we consume. Groves of walnut trees should be planted by thousands of acres in every part of the country where they have a natural home. The experiment has been tried with perfect success in the south, in the west, and in the northwest. The great difficulty is that a term of years—say from fifteen to twenty—must elapse between the investment and the return ; and however sure the latter may be, it requires to be waited for, which is the one thing of which the average American citizen is not capable. We have not much faith, as a rule, in any good to be accomplished by interference on the part of the government ; but if the legislature of every state were to give a bounty of $1 for every tree planted, we are confident that surprising and beneficial results would in due time be realized. A dollar in the hand—such is the charm of certainty and the bliss of actual possession—would go farther than the prospect of fifty in the tree.

ONTARIO TIMBER LIMITS.

The Ottawa *Free Press* says that Ottawa lumbermen will be interested in the statement made by the Parry Sound *North Star* that the Ontario Government contemplate offering the townships in that district not already under license for sale as timber limits at an early date. It is generally believed that the Government own no more unsold limits of any extent or value. This is a great mistake. There are yet some two thousand square miles of unsold Government limits in the district alone, lying on the upper waters of the Muskoka, the Magnetawan and the French rivers. Every township in the district is now more or less settled, and in order to save the timber from destruction by fire, though clearances are being made in every direction, it is absolutely necessary that the townships should be placed under license. Many of those limits are very fine, and will no doubt realize a handsome bonus. No better time for such a sale could be found, and the wisdom of the Government in taking advantage of the present boom in timber lands to dispose of such limits as it is necessary for the public interests to sell cannot be doubted.

THE spool factory lately erected at Jacquet River, county Restigouche, and only in operation a few months, was totally destroyed by fire on the morning of August 12th. There is said to be some insurance, but the loss is very heavy,

THE MOUNTAIN FORESTS AND WATER SUPPLY OF THE CONTINENT.

BY DR. JOHN A. WARDER.

The mountains were intended to be perpetually clothed with forest growths, at least to the *timber line*, at a varying elevation depending upon latitude, where arboreal vegetation is restricted by the low temperature that approaches the conditions of congelation. The traveller, to be of any use to himself or to others, should keep his eyes open and observe every phenomenon as he passes through the country.

Limited observations, when among the Rocky Mountains a few years since in Colorado, and more recently in a journey on the Medicine-Bow Mountains of Wyoming Territory, have given the writer still firmer convinctions of the truth of the first proposition, which had already been accepted, as truly set forth by forest writers of of Europe, and read in the open book of nature, as it was unfolded before his eyes in the Alpine regions of that continent. But these journeys among the Cordilleras of our country, exposed as they are and have been to the ruthless and wanton destructiveness of ignorant and thoughtless man, have filled him with serious apprehensins respecting the future water supply of our western rivers.

The destruction of these mountain forests by fire is indeed a most fearful and melancholy subject to contemplate. An inspection of portions of the public domain by one who has studied the subject, and who has either read of or witnessed the disastrous effects of the spoliation of the forests in elevated mountain heights, cannot fail to fill the mind with the most serious apprehensions.

The efforts of the Secretary of the Interior on behalf of the forests are highly appreciated by those who have made a study of the influence of the woods upon the country's water supply. The mountains (up to a certain elevation, close to the limit of perpetual congelation) were designed for the forests, nor should they ever be stripped of their arboreal covering, for, as the Secretary has well said in his annual report of 1877, if the forests in such regions be once destroyed, they will never be restored. The rationale of the action of the forests as receivers, reservoirs and fountains of waters, is perfectly simple and familiar to all students of forest science, and may be understood by any one of common powers of observation, who may have had his attention directed to the conditions of earth's surface in a wood that is in a state of nature. The fallen trees and branches, the undergrowth, the mosses and other herbage, among the decaying leaves, the accumulations of years—all these, and the leafy canopy above —break the force of the falling rains, which come quietly to the earth and are there arrested, and instead of rushing tumultuously down to lower levels, they are absorbed as by a sponge, until, although gradually percolating into the soil, they reach internal cavities or porous strata, from which they are gradually distilled through perennial springs that keep up a constant and regular supply for the streams and rivers.

But to return to Wyoming, to scenes so recently visited—while traversing a broad plateau of the range, and passing through a glorious forest primeval, the traveller closely scrutinized the trees. These were chiefly pines, and almost exclusively of our species *(pinus contorta)*, but among them, in the lower and damper spots, the most lovely firs and spruces reared their tall shafts, clothed with a mystic drapery of depending boughs, bearing the silvery green foliage of the *Menzies*, *Douglas* and *Englemann's* spruces, and of the *Grandis* firs.

While contemplating these noble trees, we suddenly came upon a scene of *appalling desolation.* Upon a tract of many square miles in extent, as far as the eye could reach in every direction, over many thousands of acres, there was not a living tree to be seen. All, all, were standing bare, stark and stiff in death; their tall dead trunks blackened by fire, except where time had kindly come to their relief and stripped off the bark, leaving the bare poles that stood by the way like shivering ghosts, waiting in purgatory until storms of years should prostrate them to the earth that bore them, when they would at length gradually crumble into mould to renovate the soil, which had been deprived of all vegetable humus by the fierce flames of the conflagration.

The forest is destroyed, the noble trees are dead and gone, too often never in our time to return, to be a kindly covering and a befitting garniture to the sad wastes, and to clothe these mountain sides with verdure, *Continued* and *continuous* desolation is their sad doom.

Practically speaking, this is and must be so. Whence can come the seed germs for the future aforesting of such extensive tracts? Man, the improvident destructive, will not do it. The kindly winds can transport the winged seeds but a short distance from the parent trees. The cunning and provident rodents have a still more limited range within which to carry the seeds they may gather, and with wise instinct store up for their hyemal repasts, from which a few might escape, to germinate and form nuclei, producing at length seeds for further distribution in the future.

Ages must be required to restore these forests in the slow course of nature, and meanwhile the degrading agencies of every storm will be carrying away the soil, and scarring the mountain sides with frightful gullies and chasms, occupied at times with violent torrents, for there is no longer any herbage, no moss or bush, nor any debris to cover the surface, and, spongelike, to absorb and retain the precipitated moisture.

Yes, our worthy Secretary was perfectly right in his assertion that in these bared mountains the forests would never be restored, when thus ruthlessly destroyed. In certain situations and over such vast areas, practically speaking, in reference to any period of time that it is worth our while to calculate upon, any time that we or our progeny for many generations need take any account of, this is sadly true.

But, it may be asked, cannot these terribly destructive fires be prevented? Cannot these calamitous results that must inevitably follow be avoided? Yes! yes! they may, and they *must* be prevented, and that at once, lest our fair continent become a desert, unfitted for the many millions it is capable of happily sustaining upon the broad territory of its beautiful bosom.

This is indeed a great question, and only requiring the exercise of a high order of statesmanship. It is truly a difficult question, but the interests at stake are enormous, and are of infinitely greater importance to this NATION than deciding who of all the great army of office-seekers shall be gratified by an appointment to this or that petty office under Government; and yet there are those who were sent to guard the great concerns of the State who cannot spare time from the scramble after office to listen, to study, nor to advocate matters of such great import as this. Oh, that we could be blessed with a race of *statesmen* something better than politicians, and capable of grasping and of solving such questions as this!

Yes! the interests at stake are truly enormous; they involve the welfare of the country, since they concern the permanence and the very existence of our rivers. If their consideration be neglected, will not some future explorer of the vast *Sahara*, that may extend eastward from the base of these mountains, find, amid the shifting sands of that wide desert, only depressions of the surface to mark the ancient beds of our great rivers and their tributaries in that American Sahara, as Champollion has observed them in the wastes of Northern Africa, ot which he said: "And so the astonishing truth dawns upon us that this desert may once have been a region of groves and fountains, and the abode of happy millions. Is there any crime against Nature which draws down a more terrible curse than that of stripping mother earth of her sylvan covering? The hand of *man* has produced this desert, and, I verily believe, every other desert on the face of the earth. Earth was Eden once, and our misery is the punishment of our sins against the world of plants. The burning sun of the desert is the angel with the flaming sword, who stands between us and Paradise."

But how shall this great work, the preservation of the mountain forests, be accomplished? How shall we preserve these treasure-houses of the snow and rain that they shall steadily distil the streams which are to fill our rivers?

It may be effected by wise legislation after we have enlightened the public upon the subject of an advanced forest science, and educated them up to a proper and just appreciation of the importance and of the especial functions of the forests on these mountain heights, as *condensers of moisture*, as *receivers* and as *reservoirs* of the water supplies of a large portion of the continent.

When so educated, and fully informed upon these important truths, with an enlightened public sentiment, the people will become more careful in the use of this dangerous agent; they will be more watchful of their camp fires, they will compel others to be more careful, and they will stamp out the first beginning of a conflagration.

In addition to this enlightened sentiment, and complimentary to it, legislation will be needed to operate on those who may wickedly or ignorantly transgress. Some of the excellent suggestions of Mr. Schurz were incorporated in the bill of Senator Plumb, of Kansas, last winter (S. 609). They might prove valuable as preventive measures, especially the appointment of forest guards, as proposed in the 3rd section. Section 13 is intended to prevent fires on the public domain, whether in prairie or timber. Such a provision has never existed in the case of Government lands, though provided for by some of the states.

The losses by fires are enormous, and should be prevented.

Some of us know by sad and painful experience how difficult it is for the philantropist, who presents a simple proposition for the public good, however great its importance, to arrest the attention of the public. We have also learned how almost impossible it is to reach the ear of the law-making powers, and to excite in their minds an active interest in such questions as are here presented; in a word, how herculean an undertaking is presented, when we attempt to educate the people, and those who represent them in the Halls of Congress, up to a proper and full appreciation of such a subject as this of *Forestry*, which so deeply concerns the public weal.

More especially unpromising does such an effort appear, when an attempt is made to impress upon their minds the absolute necessity of keeping these extensive ranges of mountain heights in a condition best adapted to attract and condense the atmospheric moisture, to receive the precipitation, to retain it for a time, and then gradually and quietly to give it off through perennial springs, as limpid fluid, to supply the fertilizing streams that shall fill the rivers which are so happily and extensively distributed over our great continent.

You who are engaged in forest studies, you who are engaged in planting trees, will unite in presenting our thanks to Secretary Schurz for the noble stand he has taken in defence of the forests on the public domain, and for the part he has taken to call public attention to the vast and wide-spreading influence exerted by them on the present and future welfare of the country. Long may he be permitted to prosecute these noble efforts in behalf of the protection, preservation, and extension of our woodland heritage!

Mr. President, the above paper is but a repetition of an open letter addressed to the secretary of the Interior, which may never have fallen under the notice of any of your members. No apology will be offered, however, for presenting it to men like yourselves, even thus at second-hand, because you are known to be interested, as western-tree planters ever are and should be, in everything that relates to this great question of trees. Situated as you are, on the great open plains, this is to you especially a vital question, and this aspect of the infinite value to you of the mountain forests cannot be devoid of interest, even in the imperfect manner of its presentation by such a tyro in forests science as your friend W.

Wicked for Clergymen.

REV.——, Washington, D. C., writes: I believe it to be all wrong and even wicked for clergymen or other public men to be led into giving testimonials to quack doctors or vile stuffs called medicines, but when a really meritorious article made of valuable remedies known to all, that all physicians use and trust in daily, we should freely commend it. I therefore cheerfully and heartily commend Hop Bitters for the good they have done me and my friends, firmly believing that they have no equal for family use. I will not be without them."—*New York Baptist Weekly.*

A NEW LUMBER DISTRICT.

A correspondent of the Toronto, Ont., *Globe*, who is writing for that paper from British Columbia, includes in a recent letter some interesting information in regard to the lumber and logging business of the Province. The point from which he writes is New Westminster, located at the mouth of the Fraser river, and very near the boundry line between that Province and Washington Territory. It is the largest manufacturing point for lumber in British Columbia, and will, no doubt, become the center of one of the most important producing districts on the Pacific before many years. The country adjacent to it is rapidly settling up, and we are informed that the business of turning the timber wealth of the country into cash already occupies a large proportion of the people. The forests are the continuation of those immense timber tracts that have made Oregon and Washington Territory famous, and the trees contained in them are similar in size and other respects to those found there. Speaking of the remarkable size that the timber attains, the *Globe* correspondent says:—As the trees in the woods through which we passed, on the Hastings road, were such monsters, I was curious to know how they could be cut down and hauled about. Miles upon miles of timber exists on the inlet of the Douglas fir species, as well as cedar. Unless one saw these trees he would scarcely credit the fact that such did exist anywhere. In numerous instances they rise a perfectly limbless trunk for 200 feet, and then over another 100 feet above that, with small limbs.

About three miles from Granville I saw trees felled that were 320 feet in length, and eight feet in diameter. There were hundreds like these all round, The woodman cuts a hole in the tree, about four feet from the ground, into which he inserts a board having sharp iron prongs. This resembles a spring-board. On this he stands while swinging his axe. The axe is the same as is used in the east, but much longer in the handle, generally four feet; occasionally a shorter one is used for the outside cuts. As he enters the tree the resin runs like water, and every blow spatters it in every direction. So soon as the tree is down the woodman attacks another. His business is to lay it on the ground. Following him comes the sawyers, who cut it into the required lengths; then the "barkers." Every inch of bark is peeled off before leaving the spot where it feel, to enable it to be moved round conveniently by the teams. In this camp an ox team of twelve oxen is employed to bring the logs to the road on which the traction engine runs. Strong pulleys, with endless chains, are used to get the log so the team can get a haul on it. Come away it must. Scarcely a word is uttered to these dumb brutes. The driver is merciful on the score of shouting, and uses a goad. He stands in the middle of the team, has a long pole, in the end of which is inserted short spikes. A few dabs of this into the hide of the bullock has the desired effect, and off they go, pulling all together for dear life as it were. They take to the "station ground," on an average, logs that will manufacture into 8,000 feet of lumber. The road on which the traction engine runs is constructed of split cedar, and hewed down perfectly level. In the center of this road-bed, at distances of seven feet apart, are placed concave blocks of maple, on which the logs can ride. As they move along, the "greaser" applies dog-fish oil to each one. The log being free of its bark, the oil takes effect, and along it glides, apparently with perfect ease. The engine makes four trips a day to and from the water, into which the logs are rolled, and thence are towed to the mill by a tug. Following the logs to the mill we saw them hauled up the gangway and placed upon the carriage; two circular saws in very short order take off the slab, one saw being suspended and revolving over the other. The lumber cut is taken on board a vessel lying at the wharf. loading for Hong Kong.

Having heard that the mill across the inlet was a very complete one, we decided on visiting the Moodyville mill, in which Senator Nelson is largely interested. Here we found matters very similar to those at Granville, except that a gang of thirty-six saws is used for cutting the log after it is slabbed. The machinery here is of the very best description, and all of the latest design. The power is obtained from a turbine

water-wheel of fifty horse-power, which drives the planing and such like machinery, while a low pressure engine 750 horse-power drives the saws. A very ingenious edger is in use here, with which, being adjustable, a wide board can be cut into any width desired while passing through, as there are no less than twelve small circulars in the mandrel, or shaft. Logs were brought in on the gangway at one end of the mill in our presence, and sent out at the other, and into the hold of the vessels, of which there were two loading, one for China and the other for South America, each having a carrying capacity of 1,500,000 feet. The lumber was cut to fill a bill, none of it being less than twenty-four feet in length, principally thirty-six and sixty, and some square timber as high as 120 feet, which will give your readers some idea of the length of the carriage ways. The company owns all the houses and ground at Moodyville, and no liquor is allowed to be sold on its property.

There is an abundance of timber on Burrard's Inlet, to last for many years' cutting. The land is of an inferior character for agricultural purposes, where such heavy timber grows, and very expensive to render fit for cropping, as the stumps are such monsters that thousands of dollars would be required to remove them from even an acre of ground. The delta lands of the Fraser are generally overflown by water in the summer, and during the high tides in December. They afford very good pasturage for stock, and as considerable rain falls on the mainland west of the Cascade range, pasture is good from early spring until late in the fall. Plenty of lumber is procurable for fencing purposes, while plenty of timber for building can be procured at any of the mills at Westminster, Emory, or Popham, and landed anywhere on the river's bank. The streams pouring down the mountains afford ample mill sites, and as these streams are never failing, no fear need be entertained of failure in the supply of water.—*Northwestern Lumberman.*

THE AUSTRALIAN TIMBER TRADE.

Messrs. Gemmell, Tuckett & Co., in their monthly timber report, dated Melbourne, June 6th, state that the improved demand for all descriptions of building materials has been maintained during the past month, and the list of sales by auction shows that a large amount of business has been carried rhrough.

American Lumber.—Sales ex *Titan*, *Edmund Phinny*, *Great Surgeon*, from the United States, and *Trevellyan* and *Cedric the Saxon*, from London. Michigan clear pine brought £18 2s. 6d. to £18 7s. 6d. for fair quality, and £15 2s. 6d. for inferior; Canadian clear, £17 10s. to £17 5s., 11×3; Canadian clear, from London, good condition and fair quality, £15 15s. to £15 5s.; 7×3 to 17×3, coarse and in bad condition, £5 12s. 6d. £7 2s. 6d.; w. p. shelving, 12 inches wide, £12; do., wider, £11 15s. to £11 12s. 6d.; clear do.; wide, £14 5s.; w. p. t. and g. ceiling, £9 2s. 6d. to £8 17s. 6d. per thousand feet. super; market closing firm at these rates, with good demand.

Ship-Building.

Halifax, N. S., August 22.—There seems to be quite a "hum" in ship-building in Nova Scotia. The following vesseis will be launched next month:—1,000-ton barque, by Osmond & Brien, Noel; 800-ton barque, by Dr. Brown, Maitland; 1,300-ton ship, by Capt. Cox, Maitland; 1,000-ton barque, by McLellan & Black, of Great Village. Alfred Putnam, of Maitland, is about laying the keel of a 1,100-ton ship, and Capt. Ellis, of the 2,500-ton ship, W. D. Lawrence, is about to commence a sister ship at Maitland. R. P. Crickter, of Kinsport, has taken the contract for a 2,100-ton ship for C. R. Burgess & Co., Cornwallis; the vessel to class 14 years and to be launched in July, 1882. At the same place Vaughan & Power have laid the keel of a 1,800-ton ship for R. M. Rand and others. Messrs. Churchill & Sons, of Hantsport, heve just launched the *Shetland*, of 1,530 tons, the largest barque ever built in Nova Scotia. They are also beginning to build another large barque.

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A Novel Mountain Railway.

A curious project is on foot in connection with the well-known baths of La Raillere, in France. The hot sulphur springs which constitute the attraction of the neighborhood are high up on the mountain, and at a considerable distance from Cauterets, in the valley below, where invalids are wont to take up their residence. An engineer has been putting his wits to work to construct a railway for this journey on an entirely novel plan. His idea is ingenious, whether or not it be practicable. He has planned a railway line like a flight of steps, with an hydraulic lift at each of them. A carriage to convey passengers from the village in the valley to the hot baths up the mountains is run on the lower step, and started down a slight incline towards the mountain. It is pulled up by a powerful break as it reaches the platform of the first hydraulic lift, which hoists it up to the second step, when it again runs forward on an incline until it reaches the second lift. This, in like manner, raises the carriage another step, and allows it to run forward, the hydraulic machinery each time raising it rather above its intended destination, so as to get sufficient velocity from gravitation to carry the vehicle forward. Gravitation is the power relied on for a forward motion, and a powerful waterfall higher up the mountain is brought under the yoke for the vertical lifting. Each lift is placed in a kind of tower, and as there are several of these, and the machinery must be a rather costly item, it must, we should imagine, be a somewhat doubtful experiment financially. The scheme, however, is none the less curious and interesting as an engineering device. Of course, it would be applicable only to such special circumstances as are to be found at La Raillere. A good head of water would be indispensable; and this feature in the neighborhood may possibly permit of the idea being carried out.

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THE TIMBER QUESTION.

BY DR. JOHN A. WARDER, OF OHIO, PRESIDENT OF THE AMERICAN FORESTRY ASSOCIATION.

This is a matter which has no politics in it, but which has already become an important question. In the new north-west part of the State, the people are yet laboring to get rid of the forest, but in the old and early settled portions it is evident to everyone that the war of the axe and the trees has been carried too far.

It is certainly one of the functions and one of the duties of the Legislature to consider this matter. It is an agricultural question also; and why that Board and the College has not given attention to it, is something of a mystery to us.

The first we heard of it, as a practical effort, came from the State Horticultural Society, in the form of a petition for a law encouraging the culture and preservation of forest trees. This was referred to the Committee on Agriculture in the House. Next came a memorial from Colonel Whittlesey, a member of the Committee of the American Association for the Advancement of Science, presented by Mr. Chapman, which had the same reference as that of the Horticultural Society. The Committee of the American Association have presented the whole subject to Congress and the Executive, so far as it has connection with the public lands. President Grant has sent in a message to Congress, and that body is effectually at work offering land bounties for tree planting on the prairies.

The future consequences of the destruction of timber will be appalling if they shall be the same here as in other countries—with our rapid modes of doing everything, this future may not be very distant. It is the object of the Scientific Committee to collect the facts respecting timber destruction as they have developed in Europe.

The papers before our Legislature refer less to the general subject than to what pertains to Ohio, for it is not in the power of Congress to do much for us. This we must do ourselves.

Mr. Chapman reported a bill which has not yet been discussed, which embraces only the encouragement of trees in the public highways. Something more than this must be done eventually; but this is a good beginning. The subject will work its way into notice from the necessity of the case, though its progress may be slow. Some two years since we cuddled the forest trees somewhat, as may be seen by our files, but with very little effect.

People are slow to perceive the advantage of what seems to concern posterity. To show that the growth of trees does not inure to future generations entirely, we quote largely from the memorial of Col. Whittlesey, which was printed by the House. He says:

The benefits of tree planting may be felt in fifteen or twenty years, and timber cut in thirty to thirty-five years.

In Salisbury, Connecticut, on the rocky slopes of the Taconic mountain, too rough for cultivation or even pasture, the spontaneous growth is cut once in twenty-five years for making charcoal, and pays the interest on $100 per acre. It is divided into twenty-five belts or strips, running from the base to the summit of the mountain, one of which is cut away each year. I have seen in southern Illinois, in 1832, a small growth of oak and hickory, on the borders of the prairie, which in 1848, after a lapse of sixteen years, was large enough for many uses on the farm, making two posts or two rails.

In Aurora, Portage county, there is a farm where the shell-bark hickory has been allowed to grow in an old slashing. After twenty years these trees produced a profitable crop of first-class nuts; and the larger ones were cut for axe helves and pick handles. Old settlers of Stark county, Ohio, have told me that where, in the year 1800, there were openings covered with bushes not as high as a man's head, in 1850 the trees were few of them less than fifty feet in height. In Massachusettes a white pine, which had been transplanted, attained a diameter of two feet (at two feet above the ground) and a height of eighty feet in thirty-five years.

The City of Cleveland has acquired the title of the "Forest City," on account of shade trees planted in the streets and public grounds, most of them within twenty-five years. This was brought about by public opinion, cultivated by the example of the late Leonard Case and a few other large owners of city lots. An elm set out by him 1824 still thrives near the south-west corner of the post office. Its girth two feet above the pavement, is seven feet, and consequently its diameter is two feet five inches. In 1836, the Hon. John W. Allen, John M. Sterling, and the late Charles M. Giddings planted native trees in front of lots in which they were interested. By their exertions, the village corporation authorized the same to be done in the north-east quarter of the public square, and in 1839-'40, in other parts of it, under the direction of John Willis. Those trees are principally elms, and now, after a life of thirty-five years, are from one and a half to two feet in diameter. By observations upon nineteen cultivated trees, whose age was known, I find that the average increase in diameter is about two-thirds of an inch each year; the annual layer or ring of growth being not far from one-third of an inch.

For light lumber and wooden ware, the white wood or poplar, the white pine, chestnut, and the linden or basswood may be used in thirty years from the seed. Three to five years may be gained by transplanting young trees. In a field of seedlings the less thrifty can be profitably thinned out and used as fuel, at twelve or fifteen years; and the ground will then produce pasturage. If at the expiration of thirty or thirty-five years it shall be entirely cleared, the soil will be found restored and ready for cultivation.

Every farm of one hundred acres should have at least fifteen acres in growing woodland, in which, by proper care, the crop may always be kept good.

As the primitive forest is thinned out for timber, or by natural decay, by a proper and well advised attention to the second growth it will renew itself perpetually.

In this State, besides the ordinary uses for timber on farms, there is an extraordinary demand for fuel and ties, by railroad companies. Their fuel may be obtained from coal mines, but no substitute is known for wooden ties. The roads of the State now require for repairs, without regarding the laying of new lines, about a million and a half of ties annually.

What is necessary here is the preservation of a proper proportion of wooded land, which is not only valuable property, but is indispensable to the full enjoyment of the remainder. When the growth of native timber is wholly destroyed in the ancient States of Europe and Asia, the region becomes, in process of time, a desert, or so near it to be of little value. The reasons why growing trees have such an important influence upon the increase of inundations, and consequently of low water and of drought, the diminution of atmospheric moisture, which affects vegetation of all kinds, the increase of heat in summer, and of cold in winter, rural beauty, shade, health, and numerous consequences that come on slowly, but in time produce prodigious results, I do not at this time propose to give.

J. A. W.

TIMBER IN BRAZIL.

Within an area of half a square mile, Agassiz counted 117 different kinds of wood, many of them admirably fitted by their hardness, tints and beautiful grains, for the finest cabinet work. The muira-pinima, tortoiseshell wood, undoubtedly the most precious wood in the world, is found in large quantity on the tributaries of the upper Amazon, where the water can be easily used as a motive power. The pao de sangre, the rosewood, the pao de ferro (iron wood), or apulela ferrea, the various species of jacaranda known to natural history students under the name of dalbergia nigra, meehærium violaceum and platypodium elegans, the white and black maraquatiara, the macacauba, the pao santo or holy wood, and the sabuarana, both of which are rivals of the most beautiful walnut—are wasted yearly on the Amazon in amounts ample enough to veneer all the palaces of Europe. Maurice Mauris, the explorer, believes that with the facilities which the Brazillian Government is ready to impart to enterprising industry, the export of these commodities would develop immense profits in the shortest time, while the capital invested need not be enormous. It is only necessary that these woods be introduced into the market to obtain a decided preference over those now most sought after in the two hemispheres. Still richer is the country in timber for the purpose of construction. The acapu *(Voucapoua Americana)* is most plentifully found there, and often in the most imposing proportions. Mr. Mauris has seen dining tables six feet in width made wholly out of one piece. The wood, like all its kindred macaranduba and itauba, or stone wood, furnishes ship timber as durable as teak. The longer these remain in water the stronger and harder they become.

A SUBSTITUTE FOR WALNUT.

BLACK BIRCH TO BE THE WOOD OF THE FUTURE —AS DURABLE AND HANDSOME AS WALNUT.

A short time ago a local sketch appeared in the *Globe* deploring the exhaustion of the supply of walnut. Since that time the subject has been discussed in most of the Canadian papers, and many suggestions have been offered as to the kind of wood that might be used as a substitute.

A *Globe* reporter interviewed several extensive furniture dealers and lumber merchants on the subject, and all were unanimous in saying that the only good substitute is black birch, which is rapidly coming into favor. Black birch is a close-grained, handsome wood, and can easily be stained to resemble walnut exactly. It is just as easy to work, and is suitable for nearly, if not all, the purposes to which walnut is at present applied. Birch is much the same color as cherry, but as the latter wood is now so scarce, and consequently so dear, the dealers do not take much stock in it. It is with difficulty that cherry wood can be obtained at $50 a thousand feet, while birch wood can be purchased at any saw-mill for $16 per thousand feet. When properly stained, it is almost impossible to distinguish the difference between it and walnut, as it is susceptible of a beautiful polish, equal to any wood now used in the manufacture of furniture. When it became known throughout the States and Canada that the supply of walnut was almost exhausted, the dealers set their brains to work to find a substitute, and now since birch has been thought of the price is slowly advancing.

AMPLE SUPPLY.

In the forests throughout Ontario birch grows in abundance, especially if the land be not too boggy. There is a great difference in the wood of different sections. Where the land is high and dry the wood is firm and clear, but if the land where the wood is grown be low and wet, the wood has a tendency to be soft, and of a bluish color. In all the northern regions it can be found in great abundance, and as the tree grows to such a size, little trouble is experienced in procuring a large quantity. The forests of the Manitoulin Islands abound with it, as well as those of the Peterborough and Haliburton districts. The Muskoka district also contains a plentiful supply.

AN ARTICLE OF EXPORT.

During the past few years large quantities of this wood have been exported from the Province of Quebec at a low figure, but this will be stopped when it is known that it is to take the place of walnut in the near future. It is very easily detected among other trees on account of its height, large trunk, and the peculiar color of its coarse bark. Most of the perforated chair bottoms now in use are manufactured from it. There is a species of bird's-eye birch, but it is very scarce, and is not more valuable commercially than the plain woods. In consequence of the prospect of its speedy substitution for black walnut, it should be husbanded with the greatest of care.

HARD TO FLOAT.

An evidence of the weight and solidity of the wood is the fact that it will sink after being a few days on the water. This fact is a slight drawback to the work of having it conveyed to saw-mills. One of the principal means resorted to is binding it together with pine logs, and thus it is brought to the mill, but pine cannot always be found where birch grows, and it is then necessary to haul it, sometimes a great distance, with the aid of horses.

The golden age—the present—when Esterbrook's popular Steel Pens are within the reach of all. The stationers can supply them. Wholesale by the leading Toronto stationers.

SAW MILL BURNED.

A large lumber mill belonging to White, Clarkson & Co., New Haven, Conn., stood close to the frontier line, between Abercorn and Richford, but was totally destroyed by fire in the forenoon of Saturday, August 6th. The fire began a little after 7 a. m. in a building adjoining the engine room, packed with shavings for use in heating the boiler. Its cause is not certainly known. It is supposed to have originated from heating of the damp shavings, or to have been set on fire by a spark from a locomotive, the railroad track being close by. Explosion of the boiler was feared, but did not occur. The flames were carried by a south wind directly over the main building, and all was consumed, together with 700,000 feet of lumber ready for shipping, which was piled up behind it. By noon there remained only the brick walls of the boiler-house, its blackened engine and tall iron chimney. It is said that this engine has now passed through the fire for the fourth time. Long rows of black beams marked where the great flame building stood. Nearly all the machinery was destroyed, or too much damaged for use. The planing machine is sound, the fan or blower injured. Happily no lives were lost, nor not any serious accident occured among the 150 or 200 volunteers who gathered from Abercorn and Richford. The burning sun of that morning, however, intensified by fire, prostrated Lyman Smith, of Richford, and two or three others. Dr. Smith was present aiding the sufferers, who were taken to Richford. Several adjacent buildings caught fire, but all were saved except the frame of an old barn. Nearer to the fire than this stood a small house occupied by the fireman, Dane. It was saved, but all hands being occupied, his wife (who can speak but little English) was alone with her baby, and fainted from terror and excitement. The only water available was a small pond near by. Mr. Priest, the manager, did all that could be done with great coolness and energy, and constant exertion. He expects it to be rebuilt immediately. —*Cowansville Observer.*

AMERICAN BARGES.

A recent determination of the United States authorities to enforce the strict letter of the law concerning lumber barges, in the carrying trade between the Canadian rivers and New York, is likely to benefit barge owners. Hitherto it has been customary for large American barges loading lumber at Ottawa for New York to take a full load, which averages about 175,000 feet. A barge with such a load as this cannot pass through the Champlain canal, owing to the insufficient depth of water. The custom, however, has been for years past to transfer a portion of the barge's cargo to scows drawing little water, and bring the lumber into this country in different portions. According to the strict letter of the United States law, when a vessel clears from a foreign port, with a certain quantity of any kind of freight, it must arrive with the same quantity specified in the clearance papers. With regard to the lumber laden barges passing through the Champlain canal, this has, for years past, been winked at for the convenience of shippers, but the United States authorities have now decided to rigidly enforce it. This will have a detrimental effect on shippers, but will benefit barge owners, as under the new regime they will be unable to take more than 125,000 feet of lumber to the barge load, thus necessitating a greater number of trips. It is believed that toward the close of navigation, when there will be a large lot of lumber to come forward from Canada, the barge owners will take advantage of the new state of affairs to raise their rates.—*Northwestern Lumberman.*

Buttermilk as a Summer Drink.

An Americcan physician asserts that for a hot-weather drink nothing equals buttermilk. It is, he says, "both drink and food, and for the laborer is best known. It supports the system, and even in fever will cool the stomach admirably. It is also a most valuable domestic remedy. It will cure dysentery as well and more quickly than any other remedy known."

BURDOCK BLOOD BITTERS cures all diseases of the blood, liver and kidneys, female complaints, nervous and general debility, and builds up the entire system when broken down by disease.

Chips.

AN English firm is said to have offered Mr. David Moore $300,000 for his timber limits situated on the C.P.R.

THE men are at work grading the road for the new siding by which the Grand Junction and Midland cars will have access to Hazlett's mill.

THE supreme court of Maine has decided that sawdust and shavings are included in the act prohibiting refuse from being thrown from the mills into the Penobscot river.

A BUFFALO despatch dated August 15th, says that lumber freights are more active, several boats having been loaded for New York at the rate ruling for some time past, namely, $2.50 per ton.

THE flywheel to the engine in Henderson Brothers' mills, Montreal, Quebec, is the largest ever put up in Canada, it being fourteen feet four inches in diameter, and thirty-two inches face. The double belt made for it is full hide width—twenty-inches wide and eighty feet long.

A LETTER from a Chicago lumberman speaks of the great lack of dock room on which to handle the great amount of lumber which has been pouring into Chicago during the last few weeks. It says that in consequence of this there was a falling off of 50 cents during a day or two of last week to save demurrage, but adds that prices rallied quickly.

A BOSTON paper says that a short trip among the lumbermen fully substantiates the statement made a few days since that the Eastern furniture manufacturers aro seriously troubled at the scarcity of black walnut timber, and that the whole supply in the United States has now become entirely inadequate to the demand.

AN Ottawa correspondent writing on August 18th, says that a raft belonging to Mr. J. R. Booth is now running the Chaudiere slides. Rafts belonging to Campbell Bros. and McLachlin Bros. are above the Chaudiere. The raft of the latter is said to be the finest taken out this year, and is said to have been sold at 40c. a foot, to be delivered at Quebec.

A FIRE BROKE out in McArthur and Rayside's saw mill at about four o'clock, on Aug. 19, at South Lancaster and lasted about one hour and a half, burning the saw mill down to the ground. The machinery is damaged considerably. The mill was insured in the Queen's of Toronto for two thousand dollars. The estimated loss is eight thousand dollars. The cause of the fire is unknown.

A CORRESPONDENT writes from London, Eng., to a furniture journal that American whitewood is very much used for ebonized work. It is found to take the stain remarkably well, and is generally preferred to any other kind of wood. Well squared, straight, round logs, of American walnut are quickly bought up at good prices. It is the poor quality, faulty, and ill-made log that are difficult to place.

A REPORT from Beef Slough, Wis., last week, says the total number of logs consigned to the different mills down the river, to date, is 256,821,810. The total amount rafted is about 267,000,000. The amount rafted last week was about 17,000,000 feet; but hereafter, owing to the rapid decline of the water, the rafting will not exceed much more than 2,000,000 per day, and it may stop altogether, until the fall rise in about two weeks.

FINAL arrangements have been completed by Messrs. Allan, Grant & Co., of Ottawa, to send to this city a large number of cars of square timber, consigned to Messrs. Cook Bros. & Co. The first train of this wood is expected here tomorrow. A switch will be run on to the custom house wharf to accommodate this cargo, which, when arrived here, will be thrown into the pond, enclosed by a boom, then rafted and towed to Messrs. Cook's cove.

A New Invention.

An improved machine for passing logs over dams has been patented by Mr. David B. Weaver, of Hopewel Township, Huntingdon County, Pa. This invention consists principally in providing the top of the dam with a strong beam or shaft having any suitable number of radial arms, the beam or shaft being adapted to be turned in its bearings by any suitable means for throwing logs over the dam.

AUTOMATIC FIRE SPRINKLERS.

A recent issue of the *American Machinist* contains a very interesting account of a series of experiments with different styles of sprinklers for extinguishing fires in sawmills or other establishments that are in danger of quick destruction by fire. The report will prove interesting to many of the *Lumbermen's* readers, though we are not inclined to think that it determines conclusively the relative merit of the different devices tested. We extract from the article as follows :—

For many years the most hazardous portions of mills have been defended against fire by parallel lines of perforated pipes, extending across the room near the ceiling, and connected with a water supply, furnished by pumps, reservoirs or tanks, so that the room may be showered by opening a valve on the outside of the building. This arrangement is particularly valuable in rooms difficult of access from the outside, where the contents are very combustible, or where the smoke is too pungent for human beings, as that of loose cotton.

Notwithstanding the absolute necessity of such apparatus, the use of this system has been open to serious objections. Property is frequently damaged by water let on the sprinklers, by accident or malice; the orifices in the sprinkler pipes are liable to be obstructed by paint or rust; and in case of emergency the water cannot be concentrated on the fire, but will be spread over the whole or half of the room covered by that system of sprinklers. The efficiency of the best planned system of pipe sprinklers is limited by the vigilance of the one discovering the fire, and the presence of mind which opens the right valve.

Within a few years there has been another type of sprinklers, termed, from the method of their operation, "automatics." They each consist of a rose head, or its equivalent, for throwing water in an upward direction over as large an area as is practicable. The distributing pipes and their branches are arranged so that these heads are about one foot from the ceiling, and ten feet from each other. These heads are kept closed by thin metal caps over the top, or valves within, either being secured by bismuth solder, which melts at 165° Fahrenheit. (Composed of one part each of tin, lead and cadmium, and four parts of bismuth.) For dry rooms and similar places, an alloy which fuses at 250° is used. The water pressure remains constantly upon these sprinklers, and when the heat in any portion of the building exceeds the melting point of the solder, the head is opened, and the water flows from the nearest sprinkler. The first supply is usually from a tank placed in the mill tower, and this is supplemented by a reserve supply, furnished by pumps, or a reservoir. The lowering of the water in the tank sounds an alarm, by means of an appratus which rings a bell or blows a whistle. This system of automatic sprinklers is no new and untried experiment as the representatives of the various sprinklers have constructed buildings in which hundreds of fires have been set and extinguished. There have been twenty-one fires in mills put out by automatic sprinklers, and in no case where properly supplied with water have they proved inadequate to serve their purpose.—*North Western Lumberman.*

Spiders Obstruct the Telegraph.

One of the chief hindrances to telegraphing in Japan is the grounding of the current by spider lines. The trees bordering the highways swarm with spiders, which spin their webs everywhere between the earth, wires, posts, insulators and trees. When the spider webs are covered with heavy dews they become good conductors and run the messages to earth. The only way to remove the difficulty is by employing men to sweep the wires with brushes of bamboo; but as the spiders are more numerous and persistent than the brush users, the difficulty remains always a serious one.—*Scientific American.*

ZOPESA.—A healthy man never thinks of his stomach. The dyspeptic thinks of nothing else. Indigestion is a constant reminder. The wise man who finds himself suffering will spend a few cents for a bottle of *Zopesa*, from Brazil, the new and remarkable compound for clensing and toning the system, for assisting the Digestive apparatus and the Liver to properly perform their duties in assimilating food. Get a 10 cent sample of *Zopesa*, the new remedy, of your druggist. A few doses will surprise you.

The Largest Manufacturers of

SHEET IRON ROOFING

IN THE UNITED STATES.

Can give the Best of References in every State and Territory.

POTTER IRON ROOFING COMP'Y,

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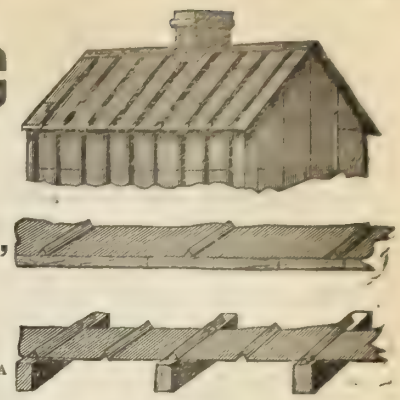
All Kinds of CORRUGATED IRON Furnished.

Send for Illustrated Circulars, naming THE CANADA LUMBERMAN. 12L11



The Best Axes in the World!

P. Jewill & Sons (Hartford, Conn.) EXTRA and STANDARD LEATHER BELTING
Jowitt & Nicholson 2nd CUT FILES. LATH YARN.

GEORGE STETHEM

PETERBOROUGH, ONTARIO, I2-L17

Importer, Jobber and Retail Dealer in Hardware.

The Crowning Triumph of the Bell Organ

The Bell Organs have just received the HIGHEST AWARD and SPECIAL PRIZE (Gold Medal) at the International Exhibition, Sydney, Australia, this year for their Organs over all the English and American makers. This, along with the unlimited awards, prove that

THE BELL ORGANS LEAD THE WORLD.

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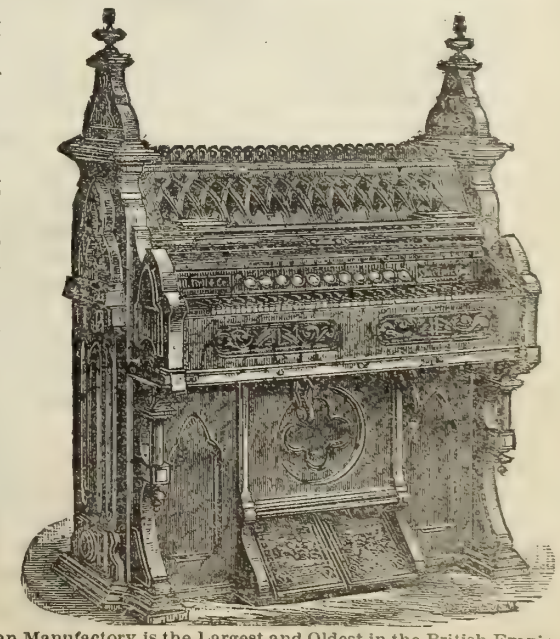
Medal and Diploma ..... Provincial Exhibition 1871
Medal and Diploma ..... Centennial Exhibition, 1876
International Medal and Diploma, Sydney, Australia, 1877



WE RECEIVED
Only Medal for Parlor Organ, Provincial Exhibition, 1878
Only Medal for Parlor Organ, Industrial Exhibition, 1879
And Gold Medal.....at Sydney, Australia, 1880

The Bell Organ Manufactory is the Largest and Oldest in the British Empire, and the fact that we have sold nearly 15,000 proves that they are the best in the market. We GUARANTEE ALL OUR ORGANS for five years. Correspondence invited. Illustrated Catologue mailed free.

W. BELL & CO.

L17 41 to 47 East Market Suqare, GUELPH, Ont.

Travelling Agent.

MR. A. L. W. BEGG has been appointed agent for the CANADA LUMBERMAN, and is authorized to collect subscriptions and grant receipts therefor and to make contracts for advertisements appearing in its columns.

The Canada Lumberman

DEVOTED TO THE LUMBER AND TIMBER INTERESTS OF THE DOMINION.

PUBLISHED SEMI-MONTHLY BY

TOKER & Co. PETERBOROUGH.

Terms of Subscription:

One copy, one year, in advance	$2 00
One copy, six months, in advance	1 00

Advertising Rates:

Per line, for one year	$0 90
Per line, for six months	50
Per line, for three months	30
Per line, for first insertion	10
Per line, for each subsequent insertion to 3 mo's.	05
Cards not occupying more than 12 lines (1 inch) per annum	8 00
Cards not occupying more than 12 lines (1 inch) for six months	5 00
Cards not occupying more than 6 lines per annum	5 00
Cards not occupying more than 6 lines, for 6 mo's	3 00

Special rates will be made for page, half page and column advertisements.

Advertisements intended for insertion in any particular issue should reach the office of publication at least three clear days before the day of publication, to insure insertion.

All communications, orders and remittances should be addressed and made payable to TOKER & Co., Peterborough, Ont.

Communications intended for insertion in the CANADA LUMBERMAN, must be accompanied by the name of the writer, not necessarily for publication, but as a guarantee of good faith. Communications to insure insertion (if accepted) in the following number, should be in the hands of the publishers a week before the date of the next issue.

PETERBOROUGH, Ont. SEPT. 1, 1881.

WASTE OF TIMBER.

Some of the writers in the lower provinces are calling the attention of the people to the serious waste of wood arising from the careless way in which forest trees are cut. Mr. E. Jack, of New Brunswick, shows a loss to that country of upwards of $500,000, on the lumber which has been cut on the Crown lands alone in that Province during the six past years. If to this be added the loss on that cut on the New Brunswick Land & Lumber Co.'s property, containing 1,600,000 acres in round numbers and on other land owned by private individuals, this will be vastly increased.

We wonder very much that the Government of New Brunswick, as well as the Land and Lumber Co. referred to, do not take joint action in the matter of cutting spruce logs, and compel the party cutting to run the log into the branches until it reaches a point where the diameter shall be at least not less than nine inches at that end.

The matter of forest fires arising from settlement merits the most serious attention of all of the provinces. We are informed by leading lumbermen on the St. John that settlers are allowed to locate themselves on spruce lands on the rivers in the Province of Quebec, where they can only eke out a miserable existence from farming, and that the fires which have extended from these settlers' clearings have cost the Province of Quebec hundreds of thousands of dollars in loss of stumpage on the St. John river and its branches alone.

We are informed that under the existing law regulating the survey of saw-lows in New Brunswick, these are required to be not less than (11) eleven inches in diameter at the top end. We are also informed that this law has received no attention in so far as its revision (which is much needed) is concerned, for many years.

Would it not be well for the Province of New Brunswick, which is so much interested in this matter, to examine into the working of the law as it now stands, and to cause such amendments therein to be made as the circumstances and the times require, these being far different from what they were when the law was framed?

A DESPATCH from Ottawa says it is understood that Mr. David Moore of that city has closed with an English company for his timber limits on the line of the Pacific railway.

OTTAWA.

From Our Own Correspondent.

LUMBER TRADE.

The lumber business is somewhat duller than it was two weeks ago. Recent sales, however, have been at prices slightly in advance of those secured in the spring, the recent advance in lumber at Albany and Tonawanda having made the market here firmer. It is quite evident that the cut of the Ottawa valley mills, and principally those of the Chaudiere, will not be so large as that of last season, owing to the quantity of logs that will not reach their destination. There is no marked changes in lumber quotations. Stock lumber runs from $18@23 per M. according to width and quality, and siding from $20@30 per M., according to thinkness, width and quality.

FREIGHT BUSINESS.

Shipments of lumber have been duller during the past week than at any other former time the present season, but so soon as the water in the Ottawa begins to rise, it will improve. The river has not been so low for a great many years as it is this. Steamers or barges with any sort of heavy draft find it difficult to get through the locks at Carillon and Ste. Annes; in fact, ordinary barges have to take light loads, and this does not pay very well. There is no change in freight rates, but in the fall they will doubtless have their usual rise. The opening and close of the season is always the best for boat-owners.

IMPROVING THE OTTAWA.

The Government are having quite extensive improvements made on the Ottawa river, in order to improve navigation. The works at Greece's Point are being pushed forward steadily, by Messrs. Stewart, Strachan & Nicholson, while the further enlargement of the locks at Ste. Annes will be again prosecuted the coming winter by the contractors, Messrs. O'Connor & Cassidy, who have got a great deal of necessary material on hand. With the enlargement of the locks at the Point, Carillon and Ste. Annes, the river navigation will be greatly improved. At this place the large reef of rock lying a short distance below the Union Suspension bridge, in the center of the river between Eddy's and Booth's docks, is to be removed, Government workmen having started operations. It has obstructed the channel, and not only been dangerous to steamers and barges, but to the bridge when the spring freshet occurs, preventing the water from readily flowing down. On the upper Ottawa improvements to the Culbute channel are being made by the contractors, Messrs. Poupore & Charlton. In a couple of years the river will be much improved. In this connection I might also mention that Mr. Askwith, contractor, is engaged in dredging the slabs and sawdust away from the mouth of the Rideau canal locks. Although the Government passed a law, several years ago, prohibiting slabs or sawdust from being thrown into rivers, the Ottawa in this section generally shows a pretty good quantity, but where it comes from the Chaudiere lumbermen don't seem to know.

THE UPPER OTTAWA LOG DRIVE.

Mr. G. B. Greene, manager of the Upper Ottawa Improvement Co., which controls the log drives for the various lumbermen in the Ottawa valley, states that the drive in progressing very fairly considering the low water. There were not such a great quantity of logs stuck in the smaller streams, but difficulty has been experienced on the main rivers owing to the rapid falling and present lowness of the water. At the Flat Rapids, on the Madawaska, a good many logs belonging to Mr. J. R. Booth are stuck, while upon some more rapids further up Messrs. Bronsons & Weston have a large number fast. Both lots will likely be left until the rise of waters in the fall. At the Chats rapids, thirty miles above Ottawa, a great many logs are constantly being stuck, about twelve thousand being fast at the present time. A gang of men are at work there. The rapids are long and shallow, and at very low water it is hard to get logs through. The last logs that will come down to the mills this season will be in the Ottawa river the first week in September, and reach here about the middle of October. The Improvement Company have about two hundred and fifty men in their employ right along during the summer season.

T. W. Currier & Co., formerly of Ottawa, are running a saw-mill at Aylmer in connection with their sash, door, blind and furniture factory, manufacturing a considerable quantity of lumber.

Lath is being sold at from 80 to 85 cents per thousand wholesale. Considerable quantities have been shipped to Montreal and the States this season.

Perley & Pattee, J. R. Booth and E. B. Eddy are the only manufacturers of deal at the Chaudiere, and the bulk of what is produced is sent to Quebec. $40 per thousand for two-thirds quality is what present stock is held at.

No logs have passed the Gatineau works for two weeks past. Ex-Ald. Bingham has his men at work on the final sweep about forty miles up, and it will be four or five weeks before they will be down.

Perley & Pattee's mill is closed down for a day or so for want of logs. J. R. Booth is running his day gang only, and Capt. Young his night gang; and Bronsons & Weston one mill by day and the other at night.

Ottawa, Aug. 25, 1881.

FIRE AT LONGFORD MILLS.

ORILLIA, Ont., Aug. 17.—To-day, at 2.20 p.m., word was brought to Orillia that the Longford Mills were ablaze. Capt. Hatley and the local fire brigade were soon out, and having taken the engines and hose reels to the Northern railway station, were delayed awaiting the arrival of a special from Barrie, which arrived about 3.30. The run to Longford was made in fifteen minutes, and the brigade were soon at work. The fire was first discovered in the rear of one of the dwellings, and soon communicated with the surrounding buildings, viz., a boarding-house, offices, store and store-houses, and a few private houses, the whole block being totally destroyed. The furniture and contents were nearly all saved, but damaged by handling. The buildings were owned by the company, and were insured for $6,500. Much thankfulness is expressed that the mills were saved, and although the employees will have to put up with rough beds for a few nights, they will have the consolation of constant work, which was vouchsafed to their brethren in labor at the Waubaushene mills. Many thanks are due to Captain Hatley and his men for turning out as they did, many losing their half-day. The brigade worked manfully.

THE *Timber Trades Journal* is pleased to learn that arrangements have lately been made between a house in Glasgow and a Canadian mill for a regular supply of pine doors and mouldings, "this being a branch of the Dominion trade which we hope to see greatly developed."

THE Ottawa *Citizen* says that the following are the quantities of timber passed through the works mentioned during the week ending 13th August:—

CHAT'S SLIDE.

Rafts.	Owners.	Cribs.
1	J. R. Booth	216
1	Young & Bronson	89
3	McLachlin Bros.	271
1	R. Campbell & Son	151
7		727

A raft belonging to J. R. Booth composed of 88 cribs, containing 296 pieces white pine and 2,041 pieces red pine, left Ottawa on the 10th instant, and on the 16th Messrs. Young & Bronson's raft of 89 cribs, containing 122 pieces white pine and 2,276 pieces red pine, left Ottawa for Quebec.

FOURTEEN years ago a Mr. Sterling, of Monroe, Michigan, placed two gate posts of white oak in front of his residence. When they were set he bored into the top of each with an inch and a half auger a hole three inches deep, filled it with common salt, tightly plugged it, and coppered the posts. Having occasion recently to change the location of the posts, he found them as sound from top to bottom as the day they were planted.

MR. GEO. STETHEM, of Peterborough, importer and dealer in harware, has handed us a change of advertisement too late for this issue, so we can only give the principal points in this notice. He calls attention to his stock of Canadian as well as American axes, lance-tooth saws, special broad and blocking axes, and trimmings for heavy harness,

A WORD ABOUT THE HARDWOODS OF THE MARITIME PROVINCES.

BY EDWARD JACK.

The shores of that part of New Brunswick which borders on the Bay of Fundy, from the north of the St. Croix to a point not far from Quaco, have been denuded of their hard as well as soft woods. From this to Upper Salmon river, in the county of Albert, there is a great abundance of yellow birch and other hardwoods. The growth is short, and not of sufficient size to make a large class of timber, but it is sound and admirably adapted to the purposes of shipbuilding, as well as to the manufacture of articles of furniture and other uses.

The great difficulty attending the export of hardwood from this locality is the absence of harbors in which vessels can ride at anchor, or remain afloat at high water, all the harbors along that coast being what are usually called "high water harbors," from the fact that the recession of the water leaves them dry at low tide.

A large part of this coast is sparsely settled, and its shores are usually steep and rugged. Fires have here done little damage; indeed, there is something in the nature of the soil, even where the forest is of spruce, in this part of the Province, which prevents the spread of the devouring element.

Schooners can enter many of these harbors at high water, and can then be loaded aground, leaving with their loads when the tide is sufficiently high.

For manufactories of articles of hardwood, where a good deal of labor has to be bestowed on the raw material, and where the articles manufactured could be boxed up to be put together at the place to which they might be exported, no better opportunity could be desired, as great quantities of most excellent wood can be hauled in the log directly to the manufactory.

In a short article, such as the present, I can afford to touch upon only one part of Nova Scotia in relation to this subject. Having occasion last season to follow the Avon river, which empties into the Bay of Fundy at Windsor, to its source near the head of Gold river, which empties into the Atlantic not very far from Chester, my attention was strongly directed to the great quantities of excellent rock maple trees which bordered the road and extended some distance from it. The road which was followed by me was that which is called the New Ross road. Leading from the Avon about sixteen miles from Windsor to Gold river, it was very rough, almost unfit to travel upon with a wagon in summer. The country rock was of granite, with boulders of which the whole surface of the country was covered; among them, especially within a few miles of New Ross, there was a splendid growth of rock maple extending for a number of miles.

Upon making enquiries at New Ross (where there is a good hotel, two churches and three or four houses) I found that the people of the country would deliver this maple there, round, in short lengths, for about $1.50 per cord. I had noticed among it a good deal which was bird's-eye.

From New Ross to Chester, which possesses an excellent harbor and where there are plenty of wharves, the distance is about fourteen miles. As the people living in the vicinity of New Ross have abundance of leisure, and as teams are plentiful, this wood can be hauled during winter very cheaply to Chester, and there placed upon the wharves for shipment to Europe.

There are numerous other places as well in Nova Scotia as in the interior of New Brunswick, especially along the line of the New Brunswick railway, where vast quantities of most excellent beech, birch and maple can be had very cheaply in the log, and the vicinity of this wood to railway transport and to the sea board renders river driving unnecessary.

It may be safely asserted that the British Provinces on the Atlantic offer the best opportunities to be found on the American coast for those desirous of obtaining an annual supply of hardwood, the source of which will last for years.

A POSITIVE FACT.—It is now established beyond controversy that DR. FOWLER'S EXTRACT OF WILD STRAWBERRY is the most perfect cure for all forms of bowel complaints, including cholera morbus, dysentry, colic, cholera infantum, nausea, canker of the stomach and bowels, piles, etc. Beware of opiates and poisoning drugs, that only check for a time and produce inflammation. WILD STRAWBERRY is safe and certain in its effects.

FOREST TREE CULTURE.

Our thanks are due to the Hon. J. G. Joly for a copy of a brief essay on the above subject, written by him last winter for the Montreal Horticultural Society. The paper contains some very suggestive remarks on the good results which might be achieved in a few years were farmers all over the country to turn their attention to sowing the nuts or planting the seedlings of suitable forest trees. They can be placed in unoccupied plots and corners, and with suitable care in selection, will grow well in spots useless for the production of any other plants. Mr. Joly then proceeded to give some of the results of his experiments in tree planting in Quebec. He paid particular attention to the black walnut, in view of its great economic value, it being worth at present about a dollar a cubic foot. Of this he says :—"True, it did not grow spontaneously anywhere in the Province of Quebec, but this appeared to me no conclusive reason why it should not grow and flourish here. The lilac comes all the way from Persia, and it spreads out its leaves earlier and keeps them unchanged later than our typical tree, the maple. I did not fear our great colds, for in the west, the natural home of the black walnut, the thermometer often ranges as low as here, though for a shorter period at a time."

He procured a bag of black walnuts in 1874, late in November, and sowed them at once, though he had to remove the snow and break through the frozen ground in order to do so. They came up about the 10th of the following June, not five per cent. failing. Without any artificial shelter those not transplanted attained in six summers' growth to an average height for four of the largest of fourteen feet. Other lots which were transplanted are doing well, but are considerably smaller. In the pamphlet Mr. Joly says :—"Judging by the growth of the living trees and the rings of the timber when cut, I do not hesitate to say that a black walnut, under ordinary circumstances, at the age of seventy-five years will have attained twenty-one inches in diameter, and will contain at least fifty cubic feet of timber, the actual value of which is about one dollar per cubic foot. He does not undertake to say how many such trees will find room on one acre of surface, but feels sure that trees of twenty-one inches in diameter standing in a single row will have space enough at eighteen feet distance from each other. With reference to the above calculation as to the length of time required for the walnut to reach a marketable size, Mr. Joly, in a note accompanying the pamphlet, after referring to the interest which has been excited all over the Dominion by the *Globe's* articles on the black walnut, says :—

"Generally those who warmly advocate some new undertaking are apt to exaggerate its advantages. In my wish to avoid that mistake I have fallen into a worse one, and some of my remarks, especially those connected with the number of years required for maturing the black walnut, may tend to discourage those willing to undertake its culture.

"By carefully looking into this matter since last winter, I think the number of years required for giving a commercial value to the black walnut tree is not as considerable as I have stated in the essay, and ought to be shortened by at least one-fourth."

Mr. Joly's essay gives also some interesting facts and suggestions based upon his experience in the cultivation of the butternut, white oak, white elm, maple, ash, tamarack, Russian pine and poplar, all of which grow in Quebec. It is greatly to be desired that farmers all over the Dominion would set about planting such trees in clumps and rows in suitable spots. Not only will they or their sons surely find them some day most valuable additions to their farms in a pecuniary sense, but nothing would add so much to the beauty and picturesqueness of the scenery in the different localities. No doubt much prejudice will have to be conquered before this will be done to any great extent, for, as Mr. Joly observes, many of the people have for generations "been brought up to look upon the forest tree as their natural enemy, to be got rid of at any cost, hacked down, burnt out of the way (for want of a better mode of disposing of it) and still troubling the settler for years with its ...ing stump." The writer of this article well remembers when, some twenty years ago, he had brought some elm saplings from a distance of thirty or forty miles in his buggy (so clean a sweep had been made in the locality), and was engaged in planting them, with what indignation one of the old settlers passing by regarded the operation. "Young man," said he, "if you had undergone as much toil and trouble as I have in cutting down those trees and getting the pesky roots out of the soil, you would find some better employment than planting them again. It always makes me angry to see it done."—*Globe.*

CHAUDIERE STEAM MILLS.

The following letter appears in the *Witness* :—

SIR,—Constant attention to business in these prosperous times has precluded the possibility of giving much heed to newspaper literature, but occasionally statements are made of so peculiar a character by anonymous writers that people on the spot are astonished, and wonder how editors can allow themselves to be imposed upon, and put into circulation what with very little trouble they would find out was purely fictitious and imaginative. This holds good in reference to what appears in your issue of the 8th instant, purporting to be a "special" from your Ottawa correspondent. It is there stated that "Mr. Rochester's steam saw-mill has shut down for the want of hands, the men having nearly all engaged to go to Eau Claire, Wisconsin. A party of about 200 mill men leave to-night. Their passage is paid. Ordinary hands are to receive $1.50 per day." In so far as I and my men are concered there is not one word of truth in the statement of your correspondent. On Saturday last, the 6th inst., my mill did not run for the simple reason that the "governor" of the engine had to be taken off and sent to the machine shop for repairs. These were promptly done, and the mill started again on Monday morning, and then, instead of stopping "for want of hands," not a solitary man in my employment had been hired to go to the States. In consequence of the excessive heat which prevailed here as elsewhere during the week ending on the 6th, the men were glad of two days' rest instead of one, and were ready for work on Monday morning. As to "want of hands," it happens that had I required fifteen or twenty more hands I could have hired them without difficulty, notwithstanding the alleged exodus. In regard to the statement of your correspondent about "200 mill men leaving to-night," &c., I am only interested, as others ought to be, in these outrageous reports of multitudes leaving Canada for the United States. Most have no more truth in them than the above, and all are adapted, if not designed, to belittle Canada and elevate "the States." Since I saw your "special," I made diligent enquiry on the subject, and from the best information am prepared to say that not one single man in regular service here has left his employment to go the States. I am told there has been a person in the city pretending to hire men, who succeeded in getting some few individuals to hang about the streets for some days. He informed the men that he had telegraphed to his employers and could get no answer. I understand the would-be boss is still here, and so are the men, and likely to be so for all that yet appears to their advantage.

JOHN ROCHESTER, M.P.

Ottawa, Aug. 11, 1881.

Conflagration in St. John.

ST. JOHN, N.B., August 25.—Hilyard Bros.' saw-mill, on the Strait Shore, was totally destroyed by fire this afternoon, caused by the woodwork supporting the boiler giving way. The mill was worth $30,000 ; insured for $10,000, divided as follows :—Commercial Union, $5,000 ; Queen, $3,000 ; Liverpool and London and Globe, $2,000. A quantity of lumber belonging to Guy, Bevan & Co. was also destroyed. One hundred persons are thrown out of employment.

DYSPEPSIA.—Strengthen your digestion—tone the stomach for utilizing and assimilating every atom of food you take ; the body needs it for strength and vigor. *Zopesa* cleanses the entire system, stimulates the Liver, keeps you regular, and able to eat ten-penny nails. Letters and postal cards come in daily, telling of cures and help from *Zopesa*, from Brazil. *Positive proof* of the health and vigor it gives in a ten cent sample. Ask your druggist.

THEY ALL DO IT.—Everybody uses "TEABERRY" for the teeth and breath, the newest, brightest, coziest little toilet gem extant. Try a 5 cent sample.

FOR SALE.

The Dexter & Whitwam Manufacturing Company, offer for Sale the Entire

Real Estate Plant and Machinery

OF THEIR EXTENSIVE

BENDING & TURNING FACTORY

Situated in the City of St. Thomas, in the County of Elgin, Ontario. For full particulars apply to H. BROWN, Manager, or E. MOORE, President. L20tf

AUCTION SALE

OF

VALUABLE LIMITS,

Situate on the Gatineau River and Lake Keepawa, 387½ Square Miles.

The following valuable limits owned by Messrs. Ross & Co., of Quebec, will be sold at Public Auction at the Grand Union Hotel, in the city of Ottawa, on

Tuesday, the 20th Day of September

NEXT, at half past two o'clock, p. m., viz :—

	Sq. Miles.
Lake Keepawa, Berth No. 48	50
" " " " 49	30
" " " " 54	30
" " " " 55	50
Total	160

	Sq. Miles.
Gatineau River, License No. 189	50
" " " " 190	50
" " " " 191	50
" " " " 192	50
" " " " 193	27½
Total	227½

The Keepawa limits are in a good pine country, and adjoin limits owned by David Moore, J. R. Booth, John Ross, of Quebec, and the British American Lumbering and Timber Company.

The Gatineau Licenses front on the river, and adjoin valuable limits owned by Gilmour & Co., and Hamilton Bros.

These limits are admirably situated for lumbering purposes, and well worthy the attention of the trade or speculators.

Terms and conditions of sale, which will be liberal, will be announced at the time of sale, or can be had from the Vendors, Messrs. Ross & Co., Quebec, or from

O'CONNOR & HOGG,
of Ottawa, Solicitors for Ross & Co

August 23rd, 1881. 2L21

PORTLAND FOUNDRY.

JOSEPH McAFEE,

(LATE ANGUS MCAFEE.)

Warehouse, Main St., St. John, N.B.

AGRICULTURAL IMPLEMENTS.

MANUFACTURER OF

Cooking, Ship, Parlor & Office Stoves

MILL CASTINGS,

Ship Windlasses, Capstans, and Ship Castings of all kinds,

(MADE TO ORDER.)

Power Capstans, Patent Ship Pumps

1y With Copper Chambers. L20

Lead Scuppers & Water Closets & all goods in my line for Ships' use.

Work done to Order with Quick Despatch.

J. G. EDWARDS

HARDWARE MERCHANT,

LINDSAY.

BELTING, FILES, BABBIT METAL,

1y **CHAINS, ROPE, and** L17

LUMBERING SUPPLIES.

E. S. VINDIN,

Commission, Shipping, Forwarding and General Agent.

LUMBER MERCHANT

Office, Tempest's Block, Port Hope. L11

WANTED.

CHERRY, WHITE ASH, AND WALNUT LUMBER.

Quote Price delivered, and Carefully Describe :—Quality, Widths, Length, Thickness, and how long Sawed.

ROBERT C. LOWRY,
Wholesale Lumber,
12L19 55 Pine Street, New York.

WISDOM & FISH

IMPORTERS AND DEALERS IN

Rubber and Leather Belting

RUBBER HOSE, STEAM PACKING,

LUBRICATING OILS, COTTON WASTE

Wrought Iron Pipe and Fittings, ½ to 2

And all Articles used in the Application of Steam to Machinery.

No. 41 Dock Street, St. John, N. B.

(SMALL'S BLOCK.)

N.B.—Estimates for Steam and Hot Water Heating Apparatus furnished on application. All work Warranted. 1y-L20

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Founders, Machinists,

And Millwrights.

Manufacturers of Marine and Horizontal and Portable

Engines, Boilers

Grain Elevators & Steam Hoists,

Saw and Flour Mill Machinery.

With Latest Improvements A SPECIALTY.

The ABEL EDWARDS CENTENNIAL TURBINE WATER WHEEL.

RODEBAUGH'S SAW FRAME, MILL DOGS and SAW GUIDES.

WATER WORKS, THE LATEST AND MOST IMPROVED, MADE TO ORDER.

LIGHT and HEAVY BRASS and IRON CASTINGS.

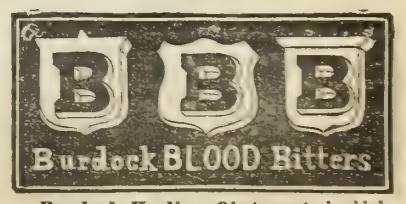
Plans and Specifications on application.

The Walkerville Foundry

AND

MACHINE WORKS.

Walkerville, Ont., June 1881. 12L16



Burdock Healing Ointment should be used in connection with Burdock Blood Bitters for curing Ulcers, Abscesses, Fevers, Sores, &c. Price 25 cents per box. T. MILBURN & CO., SOLE AGENTS, TORONTO.

TAKING CARE OF THE TIMBER.

One of the most hopeful attendants upon the development of the lumber industry of the future is found in the fact that through a persistent and intelligent presentation of the actual resources of the forests, and of the yearly and increasing demand which is made upon them, such as has been the mission of journals devoted to this interest during the last decade, the wastefulness which so pre-eminently marked the earlier operations in the forests, is well nigh overcome, and an intelligent appreciation of the value of standing timber has taken its place.

* * * * * * * * * * * * * *

Even after the value of timber began to be realized, and its owners began to look for some benefit from it, the wastefulness which took place was, from the standpoint of the present day, simply appalling. Fifteen, nay ten, years ago it was a well nigh universal custom for the operator in the woods to select only such trees as gave promise of yielding a proportion, at least, of the better grades of lumber, leaving all of twelve or fourteen inches diameter, and all which were not pretty nearly first-class in appearance, to stand the chance of destruction from fire, or at least, looking upon them as of so little value that when the best timber was taken, the land was allowed to go back to the State in default of the payment of taxes. In 1868 two partners in settling their business and dividing resources, differed as to the value of one lot of 400 acres, which had been stripped of its valuable pine, after the manner then customary. They agreed to mark upon a paper what each considered it worth, and what each would either give or take. One marked $300, the other $500. In order to arrive at a settlement, the proposition to divide the difference was accepted, and the purchaser, after holding the land for a few years, sold nearly $20,000 worth of pine from it. Both were keen, shrewd lumbermen, who thought they knew the value of each stick of pine which they owned—and they did, at its then existing value—but neither had as yet comprehended the fact that a tree of less than fourteen inches diameter had any value. It was this view of the case which led to estimates only ten years ago which, if correct, would have exhausted the pine of Michigan before this season, instead of giving it a lease of several years still longer continuance. This state of things is now happily at an end. The value of standing timber is fully realized, not only by the lumberman, but by the farmer, and we venture the prediction that but few localities, and bnt few pioneers in settlement, can now be found in the land who do not have an eye both to their own financial benefit and the demands of the future in the conservation of the timber growth. Not all of them will have patience to await the coming of the saw-mill to their neighborhood, or of the speculator who is seeking for timber, but in a large degree the wasteful destruction of trees is a thing of the past, both in hardwoods and pine growths, and the smaller sizes of timber are being utilized, until in the so-called pine districts even the smallest trees are in some manner prepared for market and public use. Could but some means now be devised to prevent the wastefulness and destruction caused by forest fires, the balance of the timber now remaining in the country might well be said to be in a fair way to contribute in its entirety to the nation's growth and advantage.—*Northwestern Lumberman.*

It is a fact well-known by dealers in hardwoods that there is a large amount of fine walnut in Indian Territory, and many dealers unmindful of the law governing its exportation, are doing a thriving business in securing it. A few days ago several mills located on Cherokee territory were seized by authority of the chief of the Cherokee nation. Among the mills was one belonging to Junk & Huff, who have been operating for several years, and who have shipped their lumber largely here and to Indianapolis. They have been working under a permit of a half-breed named Wheeler, son of Judge Wheeler, of Fort Smith, Ark., but the Cherokee council denies that Wheeler has any right to give such a permit, and when the firm refused to pay the required royalty, the seizure was made. A large lot of lumber was also taken possession of.

THE LUMBER TRADE OF NORWAY.

The following figures are taken from a report recently published by the directors of the Lumber Association of Christiania, and forwarded to the Government by Mr. Gerhard Gade, United States consul.

During 1880 the lumber firms marked 2,224,740 logs, which, with only a loss of three per cent., were floated down the Glommer river to their destination, and delivered to their owners or at their mills. The result proved much better than was anticipated in the spring and summer, which are usually dry seasons. Timber floating was considered successful in almost all the Norwegian rivers, as of the 8,160,000 logs destined for floating throughout the country, only eight per cent. remained in the rivers. Sweden was not so fortunate. In the rivers emptying into the Gulf of Bothnia, only 6,000,000 logs out of 10,680,000 old and new ones reached their destination.

By calculating the average price in 1880 of the logs delivered for floating in the Glommer river, from reports of more than 12,000,000 we find that the gross value of a log was about $2.45. The forest owners of the district received $5,450,613 for their products. If we deduct the producer's expenses for cutting, gathering, transporting and floating the logs in the tributaries to the Glommer river, estimated at $1,614,000 the net profit in 1880 for the forest owners was $4,005,600, or about $1.80 a log.

Norway exported in 1880 an aggregate quantity of 894,816 register tons of lumber. England took sixty-seven per cent of it, and France eleven per cent. By comparing the foregoing figures with those of the export lists in previous years, we observe that Norway has only in the favorable years 1871 up to 1876, excepting 1875, exported larger quantities than in 1880. The export of planed wood is always on the increase, and amounted in 1880 to more than a fifth part of the whole export. That article increased from 96,445 tons in 1870 to 193,654 tons in 1880. Sawed timber declined from 428,553 tons in 1870 to 245,548 in 1880. Square timber and other hewn timber declined from 169,743 to 100,351 tons. Spars, mining timber and pit-props rose from 100,552 to 295,616 tons, and staves from 19,631 to 40,061 tons.

Among foreign markets, England ranks first, with an increased importation since 1879 of 156,498 tons; of this, 32,745 tons were planed lumber, 37,504 tons hewed timber, and 85,580 tons spars, mining timber, props, etc. Next to England comes France, with an increase from 1879 of 26,567 tons, 4,355 tons of which were planed timber, 17,968 sawed, 2,639 square timber, and 1,739 staves. This country imported in 1870 only 7,869 tons planed timber from Norway, but in 1880 the importation reached 19,963 tons.

Germany declined considerably on account of the protective tariff, which was carried into force on October 1, 1879. The export in 1880 was only 36,203 tons to 59,962 in 1879, a difference of 23,559 tons, which fell chiefly on planed lumber; the reduction in that export being 23,303 tons. The new market which the Norwegian planing works have found in Holland promises well. The duty on planed boards, which formerly made shipments to that country impossible, was taken off in 1879. The planed timber imported into Holland before 1880 passed for the greater part to Germany, but that, of course, came to an end on October 1, 1879. We may therefore calculate that the 19,852 tons exported in 1880 to Holland remained in that country. In regard to Australia we can give no accurate figures, as much lumber from Norway reaches there via England. The direct export in 1880 was a good deal larger than the average export since 1870, which was 7,799 tons. The export to Africa is rapidly increasing; in 1870, 823 tons; in 1879, 3,803 tons, and in 1880, 7,647 tons. As long as the duties in Spain continue unchanged, that country will be of no importance for the lumber trade of Norway.

We have reduced the numbers and money to the American standard, so that they may be understood by our readers.—*Northwestern Lumberman.*

In consequence of the demand for long timber in the Chicago market, lumbermen about Menominee, Mich., intend putting in a large number of long logs the coming season.

LUMBER INDUSTRY OF PUGET SOUND.

None but those who have been on the ground can have an adequate conception of the extent of the lumbering business of the Puget Sound district, Washington Territory. The sound, a magnificent arm of the sea, reaches down from near the northwestern limit of the territory, nearly to its western middle, affording extended facilities of navigation, its numerous bays, like insinuating fingers, feeling into the territory all along shore, as if inviting, and even clutching after the commerce of the country. Around this stretch and spread of navigable waters grow the finest forests in the world, of pine, fir, spruce and redwood, the enormous growths of which are a natural wonder. Since the settlement of the Pacific coast the lumber business of Puget Sound has been gradually developed, under the stimulus of California and Chinese trade, until it has become an industry of leading proportions. Numerous mills, of first-class appointment and capacity, cluster about the indentions of the sound, many of the lumbering points constituting towns of themselves. In these towns are stores, carrying stocks of merchandise of from $40,000 to $100,000. The lumber companies own lines of ships, and frequently from four to ten vessels can be seen simultaneously loading at the dock of a single mill. Many of these mills have attached to them from twenty to fifty dwellings, and the population of a single village sometimes numbers 500 or 600 persons. A single company owns three of these immense milling establishments, with four mills capable of cutting 500,000 feet of lumber a day, together with four powerful tug boats, a score of ships, and timber lands estimated at 200,000 acres.

The leading mills at the sound are those at Ports Gamble, Ludlow, Blakely, Madison and Discovery, Seabeck, Utsalady and Tacoma besides which there are smaller mills at new Tacoma and Seattle. The daily capacity of the larger mills, when driven, is about as follows:—

	FEET.
Port Gamble	200,000
Seabeck	80,000
Discovery	70,000
Madison	100,000
Blakely	100,000
Tacoma	90,000
Utsalady	75,000
Ludlow, when completed	225,000
Total	940,000

The smaller mills about Seattle, the principal lumbering point of the district, will aggregate a daily cut of 150,000 feet, making the total diurnal product of the mills about Puget Sound nearly 1,100,000 feet. The cut of the mills during the year ending June, 1881, was 200,000,000 feet. Of the lumber product of this region 25,000,000 feet a year is shipped to foreign countries, 25,000,000 used at home, and 150,000,000 sent to California.

This great industry had its beginning thirty years ago, in a little water-power mill erected in Thurston county by James McAllister. The capacity of this mill was 1,000 feet per day. The first steam saw-mill was erected by H. L. Yesler, in Seattle. in 1853, and had a daily capacity of 80,000 or 10,000 feet.

Great as has been the increase of the past, its volume is small compared to what may be expected in the future. The expansive and towering forests about Puget Sound are but just touched by industry, and the lumber interests of that region are yet to feel the energy of the Northern Pacific traffic. The future of the lumber business of Washington Territory can be seen as in a glass, but not darkly.—*Northwestern Lumberman.*

YOUNG'S POINT.

The Drives.—Another large sawlog drive belonging to Irwin and Boyd will pass through here this week *en route* to their mills at Nassau. The last gang of men belonging to Mr. Hazlitt's drive were well behaved in every respect.

Dr. Fowler's Extract of Wild Strawberry cures all forms of bowel complaints in infants or adults. The most safe, pleasant and perfect remedy known. Purely vegetable and free from opiates or poisonous drugs.

If You are Suffering with a cold do not fail to try Hagyard's Pectoral Balsam; it is daily relieving its hundreds throughout our Dominion. It is pleasant and palatable.

THE ENGLISH MARKET.

Robert Coltart & Co's *Wood Circular and Prices Current*, dated Liverpool, 2nd August, says:—

A better tone has been noticeable in the wood market during the past month, and in some articles an advance has taken place, more especially in spruce deals, in which the decline in value has been arrested and much better rates obtained. In consequence of the excitement in Canada, chiefly as regards white pine, importers are now holding Quebec goods firmly, The import has been moderate, and if the present steady consumption continues, a more healthy feeling will doubtless soon be established, but there is still no room for increased supplies.

Colonial Woods.—For yellow pine there has been a fair demand, and the new arrivals have gone well into consumption. Of waney board a parcel of 2nd quality, 17½-inch average, has been sold at 2s. 1½d. per foot, and 2nd quality, 17-inch average, at 2s. per foot. Of square pine, a parcel of A quality, 15½-inch average, has been sold at 2s. 3½d. per foot, and a parcel of prime deck plank wood at 2s. 2½d. per foot. Of red pine the sales have been by retail only. Ash of prime quality and good size is inquired for. There are no sales of elm to report. For oak the demand still continues dull, and there is no improvement in the consumption; the sales have been by private only. Wagon scantlings continue to arrive too freely, and sales are difficult to make; a parcel of prime quality realized 2s. 4d. per foot. The consumption of birch continues on a limited scale, and the stock is more than sufficient; 979 logs ex-*Arabia*, from St. John, N.B., realized prices ranging from 14d. to 2s. 2d. per foot, averaging 16½d. per foot. Of black walnut several parcels have been sold during the month at prices ranging from 4s. to 5s. per foot. The consumption of N. B. and N. S. spruce deals continues good, and the stock now consists of 17,380 standards against 24,051 standards at the same time last year. Early in the month sales of St. John were made at £6 5s. per standard, but have since advanced to £6 10s., and the latest sales are reported at £6 15s. per standard. By auction several cargoes of St. John have been sold at an average of £6 10s. 5d. to £6 11s. 5d. per standard; Parsboro' at £6 11s. 9d. per standard, and Buctouche at £6 8s. 9d. per standard, ex quay. Dalhousie pine deals realized £11 per standard for 1st quality, £8 2s. 6 per standard for 2nd quality, and £6 15s. per standard for 3rd quality. Of Quebec pine deals the stock consists of 8,657 standards against 5,218 standards at the same time last year, and the consumption 2,561 standards against 1,798 standards. At auction 1st quality realized from £19 to £22 per standard for 3×11 and wider, and by private, 3rd quality are reported sold at £8 10s. per standard. Quebec merchantable pipe staves are selling at from £75 to £80 per mille, and puncheon at about £21 per mille.

PRICES—FROM BRITISH AMERICA.

	£	s.	d.		£	s.	d.
Yellow Pine Timber—							
Quebec, per cubic foot	0	1	2	@	0	2	2
" Waney Board	0	2	0		0	2	6
St. John's, 18 inches average	0	1	8		0	2	0
Other ports	0	1	2		0	1	5
Red Pine, Quebec	0	1	2		0	1	7
Oak	0	2	8		0	2	11
Elm	0	1	8		0	2	0
Ash	0	1	6		0	2	0
Birch—							
St. John	0	1	2		0	1	5
Quebec	0	1	5		0	1	7
Nova Scotia	0	1	0		0	1	1
Spars—							
Spruce	0	0	10		0	0	0
Deals—							
Quebec and Michigan pine, 1st quality, per stand	19	0	9		20	10	0
2nd quality, per standard	13	10	0		14	0	0
3rd quality, per standard	8	5	0		8	15	0
Planks, Spruce, St. John	6	15	0		5	15	0
Nova Scotia, etc	6	5	0		6	10	0
Staves, Quebec Merchantable Pipe per M.	75	0	0		80	0	0
Quebec culls, per M	50	0	0		57	10	0
West India Merchantable Pipe, per M.	20	0	0		21	0	0
West India culls, per M	15	0	0		16	0	0
Oars, Ash, per running foot	0	0	2½		0	0	3
Handspikes, Hickory, per dozen	0	16	0		0	18	0
Lathwood, per fathom, 4 feet	4	0	0		4	10	0

Burdock Blood Bitters cures scrofula, erysipelas, salt rheum, piles, and all humors of the blood. Cures dyspepsia, liver complaint, biliousness, constipation, dropsy, kidney complaints, headache, nervousness, female weakness, and general debility.

TORONTO.

From Our Own Correspondent.

AUGUST 10.—During the past two weeks lumber shipments from the north to this port have been much brisker than for the two weeks preceeding, although not yet nearly up to the wishes or expectations of shippers, and it is now quite certain that it will not assume the proportions required during the remainder of the navigable season, as it is now evident the company has not sufficient rolling stock on hand to meet the demands made upon them, consequently the wants of shippers cannot be fully met until the company procure more lumber flats.

The removal by death of the late F. W. Cumberland, Esq., for many years the successful manager of the N.R.R., is much to be lamented. He had proved himself to be a most efficient railroad man, always keeping in view before all, and above all other interests, that of the road entrusted to his management, sacrificing himself, as few men will be found willing to do, in order to promote the welfare of the company, and the success which has attended his efforts is well known. Let us hope that his mantle will fall on the shoulders of whoever may be appointed as his successor.

The traffic from the northern end of the line to Hamilton and points west of that place is constantly on the increase and as cars are more readily obtained for the western trade, as the G. T. R. Co. place cars freely at the shippers' disposal as soon as called for, the wants of retailers are freely met on the portions of the road supplied by that company. No so here, however. Our local trade languishes for want of the same facilities of transportain afforded to western dealers.

The scarcity in shingles still continues, and consequent on that scarcity prices are again advanced, retailers now demanding $3 per M. for XXX, and the prospect is for a still further advance. Lumber brought here by rail finds quick and ready sale for local use, and the prospects for a brisk fall trade is good, if lumber can only find its way here in sufficient quantities to meet the demand. Cherry lumber is still exceedingly scarce, $3 per M. being freely offered by carload if quality is good.

In my last letter I promised to give you the names of other firms doing a wholesale and retail business in lumber here. Prominent in the wholesale trade is the firm of Thompson Smith & Son, who manufacture largely north of this city and at Duncan City, in the State of Michigan. Nearly the whole proceeds of their mills finds its way to the Albany and Chicago markets. The firm is an old established one, and highly respected. Next comes the Toronto Lumber Company, who do a large business with the American as well as in the local market. Next we have the firm of Donogh, McCool & Oliver, the members of which are all young men, and whose character for probity and straightforward dealing stands high with all who have had any business transactions with them. They are enterprising young men, and are doing a good wholesale trade. There is also the firm of S. C. Kennedy & Co., the senior member of which was formerly connected in business with two of the members who now comprise part of the Toronto Lumber Company. This firm bears a good reputation, and is doing a thriving business—wholesale only. Then we have the following companies represented here: The British and Canadian Lumbering and Timber Co.; the Muskoka Lumbering Co,, and the Parry Sound Lumber Co., the largest part of whose business is transacted with the English and American markets, disposing of full vessel cargoes and whole mill stock; in fact, their transactions are of considerable magnitude.

There are no doubt some others whom I do not at present call to mind, and to whom I may refer in future letters.

In the retail trade we have quite a large number of firms doing more or less of a carload business, as well as retailing from the yards. I will name them in order as near as I can to that which their prominence entitles them to.

The largest trade, so far as dollars and cents are concerned, is doubtless done by the firm of John Oliver and Co., who deal nearly exclusively in hardwoods, embracing all the fancy varieties, including veneers of all kinds, and the stock carried by them is a costly one. Messrs. Hillock & Kent do a thriving retail trade in both pine and hardwood, as also considerable of a carload trade, and they bear a good reputation as men of strict integrity.

Next comes the firm of Bryce Bros., who do a large local trade, and generally carry a full stock.

We come next to the firm of S. & J. Willcock, who are pushing young men and do a large trade on a small piece of land, turning over their stock so quickly as to nearly obviate the necessity for piling.

Wm. Latch, whose mill is situated on the North Simcoe Junction line of road, does a compact business by carload and from the yard.

Joseph Davidson has his yard at the western limit of the city on the confines of the thriving village of Parkdale, and adjoining his yard is the yard of McKinley & Son. Both of these firms do a thriving trade, and are highly thought of as business men.

I find I will have to reserve the names of other dealers for a future letter, but I think I have now given your readers sufficient to enable them to take pick and choice in case they wish either to purchase or dispose of any quantity or kind of lumber.

The following are the quotations:—

Mill cull boards and scantling	$ 9 00
Shipping cull boards, promiscuous widths	12 00
" " stocks	13 00
Scantling and joist, up to 16 ft	12 00
" " " 18 ft	12 00
" " " 20 ft	12 50
" " " 22 ft	13 00
" " " 24 ft	13 50
" " " 26 ft	14 50
" " " 28 ft	15 50
" " " 30 ft	17 00
" " " 32 ft	18 00
" " " 34 ft	20 00
" " " 36 ft	22 00
" " " 38 ft	25 00
" " " 40 to 44 ft	30 00
Cutting up planks to dry	18 00
" boards "	16 00
Sound dressing stocks	15 00
Picks Am. inspection	26 00
Three uppers, Am. inspection	32 00
1½-inch flooring, dressed	28 00
1½ " " rough	14 00
1½ " " dressed	24 00
1¼ " " undressed	14 00
1 " " dressed	20 00
1 " " undressed	15 00
⅞ Beaded Sheeting, dressed	20 00
Clapboarding, dressed	12 50
XXX sawn shingles, ₱ M	3 00
XX sawn shingles	2 00
Sawn Lath	1 50

LONDON.

From Our Own Correspondent.

AUG. 12th, 1881.—When matters are in a normal condition and business is transacted with a machine like exactness, without the spurts incident to corners and the speculators of controling capitalists, a trade report as a rule reads dull and stale, and there is a very strong desire on the part of correspondents to look through an imaginary telescope with double magnifying power, it seems born in them, though they have great reverence for everything truthful, they would scorn to keep back a fabrication if it would be productive of good to a waning community. It should be borne in mind too, that correspondents are not paid by the year the same as Congressmen, but by the "job," so it often happens that they haven't time to sift out the wheat from the "chaff," but are often rushed from scenes of blazing pleasure to pictures of horror and misery, and they are apt to get their ideas mixed up considerably. I am not writing this now in extenuation of my case, in this letter at any rate, but we don't know what is before us.

The lumber business of this city has toned down considerably since my last letter, and comparative quietness prevails, though merchants are not complaining, as they say they have plenty to do, and a little *siesta* will invigorate them for a lively time, which is expected will set in early next month and last till the first frost.

The inconvenience felt for the want of Railway car accommodation has now passed over, and all cars called for are immediately on hand. Shingles are now plentiful, but you will observe another advance.

The handsome block of wholesale warehouses just nearing completion, on Richmond street, made a big hole in $5,000 for the lumber contract and the amount used for the exhibition grounds, including new fences, &c., will reach fully 500,000 feet.

The cedar block pavement, (second contract), is let, but not to the same firm who executed the first one, and work will commence immediately.

Hardwood No. 1 sells here for about $4.80 per cord, and the price will no doubt be well sustained, if not much higher, in consequence of the probability of coal keeping up.

My report for this market is firm and steady with prospects ahead for a short spell of rushing business.

Penetanguishene Foundry
AND
MACHINE SHOP
CRAIG & CAMERON, Proprietors.

The undersigned beg to announce to the public that they are prepared to make all kinds of **Mill and Steamboat Brass and Iron Castings.**
All kinds of PLOW CASTINGS kept on hand. Plow Points and Landsides a specialty.
We have first-class machinery and are prepared to do all kinds of TURNING or PLANING on short notice.
We hope by strict attention to business and moderate charges, to merit a share of the public patronage.
☞All work guaranteed.
G. A. CRAIG.
C. CAMERON.
1yL17

SAMUEL WINDRIM,
MANUFACTURER OF
Agricultural Implements, Etc
MILLBROOK, ONTARIO.
HAVING DISPENSED WITH THE SERVICES OF AGENTS, I take this opportunity to bring to the notice of intending purchasers of Reaping Machines, that I have now on hand a quantity of the Celebrated
HANLAN REAPER,
which has NEVER BEEN BEATEN YET, and am prepared to allow the Agents commission—FIFTEEN PER CENT—on all purchases. L17tf

A. L. UNDERWOOD
WHOLESALE DEALER IN
White Pine, Basswood & Hardwood,
82 King Street East,
TORONTO, ONT.
1yL16

P. FREYSENG & CO.
PROPRIETORS OF THE
Dominion Cork Cutting Co
BY IMPROVED MACHINERY.
☞**All kinds of Corks in stock and Cut to Order. Corks & Life Preservers a Specialty. Corkwood, Tinfoil, Capsules, Wire, &c.**
71 Jarvis Street, TORONTO. 6L16

JAMES HADDEN,
MANUFACTURER OF
Shingles and Dressed Stuff.
Foxmead, P. O., County of Simcoe, Ont.
Two Planers for sale or exchange for a Boiler. b26

S. S. MUTTON & Co.,
Wholesale Lumber Dealers
TORONTO.
We have for Sale a large quantity of PINE, OAK, WHITEWOOD, ASH, CHESTNUT, CHERRY, BUTTERNUT, BASSWOOD, &c.
☞P.S.—Also on hand 120 M dry Oak 2 to 4 inches thick, will be sold cheap to close it out. 1yL16

J. K. POST & CO.
LUMBER MERCHANTS
And Shipping Agents.
OSWEGO, N. Y.
L12-1y

Flexible Board Rules,
With Steel Head, either Cleveland or London make, at $1.75 Each.
GEORGE STETHEM,
PETERBOROUGH, L16

A RARE CHANCE.
AUCTION SALE OF
Valuable Timber Limits
—AT—
OTTAWA,
On the 20th of September.

On Lake Nipissing.

License No. 455, Sixty Square Miles Area, situated on the head waters of the Mattawa and South Rivers. This limit is wooded with Pine of the very best growth and quality. Timber cut thereon can be taken out either via the Mattawan to the Ottawa River, or by Lake Nipissing and French River to Georgian Bay with the greatest convenience.
In connection with this limit is a well improved farm of about 200 acres, deeded property, 100 acres cleared, with buildings, stock and crop, all of which will be sold at valuation.
There are also Six Timber Births numbered 12, 20, 36, 37, 39 and 31, situated on the River Beuve and Western Arm Bay, each 36 miles square. These limits have never been worked, and abound with the very finest quality of white Pine. Access from Georgian Bay via French River is quite easy. The Canada Pacific Railway passes in the neighborhood of these limits.

On the Georgian Bay.

License 169, on the Missisaga River, consisting of 36 square miles area, and License No. 200, situated on the Thesselan River, consisting also of 36 square miles area. These limits have never been worked and are covered with an abundance of the best Pine Timber.
The above limits will be sold on the 20th September at the Grand Union Hotel, Ottawa. Conditions made known on day of sale. For particulars apply to R. NAGLE, Ottawa; JOHN SCULLY, commission merchant, Toronto; or to J. T. LAMBERT, 62 Wellington Street, Ottawa. 2L21

AUCTION SALE
OF VALUABLE
Timber Limits,
Situated Near Lake Nipissing.

Notice is hereby given that (if not previously disposed of by private bargain) the following Valuable Timber Limits will be offered for sale at Public Auction in the
CITY OF OTTAWA,
ON
Thursday, the 22nd Day of September Next,
VIZ.:

	Sq. Miles.
Berth No. 23, on the River Bueve, near Lake Nipissing, comprising	36
Berth No. 43, on the River Wannapitac, near Lake Nipissing, comprising	36
Berth No. 51, on the River Wannapitac, near Lake Nipissing, comprising	36
In all	108

These limits contain, in the aggregate, a large quantity of magnificent pine timber.
Berth No. 23 is estimated—as the result of a recent exploration—to contain a quantity of trees sufficient to produce at least half a million cubic feet of square timber, besides two hundred and fifty thousand standard saw logs. The river is available for driving to Lake Nipissing.
There is a good mill site on the Bueve river, about three miles from Lake Nipissing.
Lumber could be transferred thence by water to the Callender station of the Canada Central Railway, the line of which is projected to pass directly through this limit.
Lumbermen and others desirous of acquiring limits are invited to examine these berths in the interval preceding the day of sale.
The owners reserve the right to dispose of either or all of them by private bargain in the meantime, and will be ready to consider any offers that may be made.
Terms of purchase will be liberal, and will be made known before the sale, the place and hour of which will be duly advertised.
Persons desiring further particulars are invited to communicate with the undersigned.
STEWART, CHRYSLER & GORMULLY,
Solicitors, Ottawa.
Ottawa, 28th July, 1881. 3L20

J. T. LAMBERT,
Lumber and Commission Agent.
FOR SALE.

150	Mlls.	White Pine,	1 x 10 Stock.
175	"	do	1 x 12 "
11	"	do	2 x 10 "
20	"	do	2 x 12 "
140	"	do	1 inch Siding.
20	"	do	1¼ "
40	"	do	2 x 10 Joists.
16	"	Cedar,	3 x 6 "
19	"	Basswood,	1¼ inch.

APPLY AT THE OFFICE, L20
WELLINGTON STREET, OTTAWA.

Market Reports.

MONTREAL.

From Our Own Correspondent.

AUGUST 22.—Since the date of our last report (August 10th) shippers have been pretty busy, having shipped four cargoes to the River Plate, and three vessels have taken a good deal to London. At the present time four vessels have been laid on for South America, and four are loading for ports in the United Kingdom. Freights to South America are firm. Large vessels are getting $13.50 per M., and small vessels $15. Shipments since 10th instant to date were :—To Montevideo, 1,375,304 feet ; Buenos Ayres, 39,632 pieces and 586,862 feet ; London, 13,646 pieces and 603,000 feet. Total shipments since opening of navigation to date to the River Plate were 4,984,190 feet, against 2,683,675 feet for the same period of 1880, being an increase of 2,3000,515 feet.

At the present time there is not much doing in the lumber yards, as is usually the case between the seasons. The only reported business is in small lots for building purposes within our range of quotations, but some activity is expected next month. We quote :—

Pine, 1st quality, ℔ M	$32 00@40 00
Pine, 2nd " ℔ M	18 00@24 00
Pine, shipping culls, ℔ M	12 00@15 00
Pine, cull deals, ℔ M	8 00@10 00
Pine, mill culls, ℔ M	5 00@ 6 50
Spruce, ℔ M	8 00@10 00
Hemlock, ℔ M	8 00@10 00
Ash, run of long culls out, ℔ M	16 00@18 00
Bass, " " ℔ M	14 00@16 00
Oak, ℔ M	35 00@45 00
Birch, ℔ M	17 00@20 00
Hard Maple, ℔ M	18 00@25 00
Lath, ℔ M	1 25@ 1 35
Shingles, 1st, ℔ M	3 00@ 0 00
Shingles, 2nd, ℔ M	2 00@ 0 00

CORDWOOD.—The demand is improving and the market is firm as under for large lots :—

Upper Canada Maple	$ 6 00@00 00
Birch	5 50@00 00
Beech	5 00@00 00
Tamarac	4 00@ 4 50

TORONTO.

From Our Own Correspondent.

AUGUST 26.—During the last week or ten days lumber shipments from the north have largely improved in regard to quantity received here, but just at present it has again fell off owing to scarcity of vessels. Docks are full, and a large number of loaded cars standing awaiting shipment. No blame is therefore to be attached to the company in this instance, as most certainly if shippers do not unload their lumber promptly, they cannot expect to be supplied with cars. The local wants, however, are not near fully met as yet, shippers in all cases getting the preference, as the cars are generally unloaded more promptly ; so that it is evidently to the interest of the company to grant shippers all the cars they can spare, and let the local trade go. It is quite natural for a little selfishness to crop out in corporations as well as in individuals.

Lumber comes in freely over the Midland and Grand Trunk to this city ; and in this connection it gives me great pleasure to say a good word in behalf of that much abused company, the G.T.R. So far as lumbermen are concerned, at least, there is little fault to find with the treatment received at their hands. The officials, without a single exception, so far as I have had an opportunity of judging, are gentlemen in the truest sense of the word ; always obliging and courteous, and prompt in the transaction of all business coming before them. Not half as much red-tapeism in their method of doing business as with some one-horse roads to be found here ; in fact, it is generally with the latter that you find the most snobbery and incivility.

The price of the various grades of lumher is likely to advance in the local market, especially on bill stuff cut to order. An increase in the rates of freight from all points north is said to be in contemplatfon by the H. & N. W. R. Co. This was to be expected at no distant date after the N. R. Co. obtained possession of the H. & N. W. R., thereby stopping competion from all points north of this place and Hamilton. Most people who do business over those roads are under the impression that rates are high enough at present, but when the powers that be determine otherwise, they will have to submit gracefully if they like, but submit anyway ; this is the inevitable result of all monopolies.

There is now a large quantity of cedar posts coming to this market to meet the demand consequent on the building and laying down block pavement on many of our streets. None but perfectly sound cedar is allowed to be used in the pavement, and the price of cedar is likely to advance, especially as the shipper hitherto has not received sufficient remuneration for his timber and trouble in cutting and hauling, the prices paid in the past only leaving him something like $16 per car at the point of shipment. I have doubts, however, as to this kind of roadway fully meeting the wants of our citizens. In my opinion the nature of that kind of wood is so porous ; that it will absorb much filth and moisture, and ultimately become a nuisance.

Freights to Oswego continue the same, but will doubtless shortly advance. Rates for unloading at Oswego having advanced ten cents per M., and sailors' wages being likely to advance, it is hard to see how vessel owners can long continue to carry at the present rates, as it certainly leaves them a very small trifle after paying all expenses incurred.

Shingles still continue scarce, and dealers hesitate to pay the advanced figures demanded by manufacturers, although my own impression is that prices are no higher than they should be in order to enable the maker to pocket a fair profit.

Mill cull boards and scantling	$ 9 00
Shipping cull boards, promiscuous widths	12 00
" stocks	13 00
Scantling and joist, up to 16 ft	12 00
" " " 18 ft	12 00
" " " 20 ft	12 50
" " " 22 ft	13 00
" " " 24 ft	13 50
" " " 26 ft	14 50
" " " 28 ft	15 50
" " " 30 ft	17 00
" " " 32 ft	18 00
" " " 34 ft	20 00
" " " 36 ft	22 00
" " " 38 ft	25 00
" " " 40 to 44 ft	30 00
Cutting up planks to dry	18 00
" boards "	16 00
Sound dressing stocks	16 00
Picks Am. inspection	26 00
Three uppers, Am. inspection	32 00
1½-inch flooring, dressed	28 00
1¼ " " rough	14 00
1¼ " " dressed	24 00
1¼ " " undressed	14 00
1 " " dressed	20 00
1 " " undressed	15 00
⅞ Beaded Sheeting, dressed	20 00
Clapboarding, dressed	12 50
XXX sawn shingles, ℔ M	3 00
XX sawn shingles	2 00
Sawn Lath	1 50

LONDON, ONT.

From Our Own Correspondent.

AUGUST 25.—My last letter, which from some unexplained cause did not appear in your issue of the 15th August, gave, I think, a good synopsis of the lumber trade of this city as it stands today. I mentioned in that letter that business had slackened off somewhat, and that merchants were waiting for the expected "spurt," which would last in all probability till the setting-in of the first frost. Well, the "spurt" has not yet arrived ; meantime there is plenty to do, and more time to do it in than dealers have had for the past few months. The demand for mill culls and scantling is very brisk, and I may say the same of scantling and joist of the medium lengths, but in other grades everything is quiet, shingles excepted.

The Exhibition building is now nearing its completion in lumber material, and my statement of half a million feet will perhaps be a somewhat short estimate of the quantity used.

The cedar block pavement from Dundas to the G. W. R. depot on Richmond will probably require about forty to fifty carloads of posts, and the locality from which they will chiefly come is at present indefinite. Will know more of this matter when the laying begins. I only hope the merchants on Richmond street will not fling their poisoned arrows of despotism at the workers as the Yonge street shopkeepers did during their temporary state of transition. Inconvenience and laying block pavements are synonymous, and those who have been through the mill should know this.

There is no change to report in prices since my last, and a copy of this I append.

I wish I could give you some items of shipping, but will have to wait until communication is opened up with the St. Clair river and the Georgian Bay via the "Thames," which it has been proposed to "scoop out" and make navigable.

Mill cull boards and scantling	$ 8 00
Shipping cull boards, promiscuous widths	10 00
" " 10 and 12 in. stocks	10 50
Common boards, promiscuous widths	13 00
Scantling and joist, up to 16 ft	14 00
" " " 18 ft	14 50
" " " 20 ft	15 50
" " " 22 ft	16 50
" " " 24 ft	18 00
Common stocks	14 00
Common 2 in. plank	13 00
Cutting up plank and boards	18 00
Sound dressing stocks	17 00
Clear and picks	28 00
Three uppers, Am. inspection	35 00
1½ inch dressed and matched flooring	20 00
1¼ " " " "	20 00
1 " " " "	20 00
XXX sawn shingles, ℔ M	3 25
Lath per 1000 feet	4 25

ST. JOHN, N. B.

From Our Own Correspondent.

SHIPPING.—Shipping is still scarce in the harbor, and will be so for some little time, until the fall fleet begins to put in an appearance.

VESSELS IN PORT.—The following is a list of the vessels in port, with their tonnage and destination :—

STEAMERS.

Scindia, 1423, dis.

SHIPS.

Asiana, 1193, Liverpool.
John Murphy, 1472, Liverpool.
Missouri, 818, repairing.
Naval Reserve, 1831, Liverpool.
Wm. A. Campbell, 1538, Liverpool.

BARQUES.

B. Hilton, 986, dis, W. C. England or E.C. Ireland.
Hants County, 641, Bristol Channel.
Huron, 774, United Kingdom.
Industri, dis.
Sichem, 519, dis.
Providence, 478, ——
Vestfold, 500, dis.
Cite d'Aleth, 273, France.
Algeria, 620, Hare Island.
Kate Crosby, 697, Dublin.

BRIGS.

Leah, 554, ——
Myrtle, 169, dis.
G. S. Berry, 236, ——
Curlew (new) 350, Bristol Channel.

FREIGHTS.—Freights continue to stiffen a little, as a consequence of the rising market in England, and at this writing we can quote from 56/3@57/6 to direct ports in United Kingdom, and we know of one charter made at 60s., with a choice of five ports. American and coastwise freights are about the same. Logs are scarce and in demand, and very easily command $8. Deals are also hard to find. A great many small country mills have shut down for the present, being out of stock, and supplies from this source are about exhausted. The stock on hand for sale is small, and lots are readily disposed of at $9 per M.

The American market just now is dull, in consequence of recent numerous arrivals of lumber-laden vessels.

The tonnage from the port of St. John, arriving in Liverpool up to the 1st of August of this and the two preceeding years is as follows :

1879	50,496
1880	53,103
1881	31,055

Showing a considerable decrease for this year.

The stock of lumber on hand in Liverpool on the first of August, with the importation and consumption, is as follows :

	IMPORTATION.	STOCK.	CONSUMPTION.
N. B. and N. S. Spruce Deals	Standards. 11,524	Standards. 16,428	Standards. 8,681

The English market still shows signs of improvement, and we sincerely hope that the advance may not be a temporary inflation, but a healthy and permanent improvement.

Your editorial remarks anent the practise of running American logs through Canadian waters and shipping the manufactured article free of duty to the States, are very pertinent. There is no doubt that the privilege is much abused, and the Canadian manufacturer is simply two dollars per thousand worse off than his American next door neighbor who produces a consul's certificate that his lumber was cut in American waters, and is the growth and produce of the United States. The evil, for it is one, should most assuredly be remedied, and that right speedily.

St. John, N.B., Aug. 20, 1881.

From Another Correspondent.

THE LOG SUPPLY.—The heavy rains during the last few weeks caused a great rise of water in our rivers, in consequence of which large quantities of logs which had been hung up on the main river and larger tributaries have been run out, including a large portion of those belonging to the State of Maine in the Aroostook river. Those logs will now become available for the fall sawing. As the latest advices from Great Britain report the continued improvement of the markets on that side of the water, and as the shipments from this direction for the present, as well as for the immediate future, will be on a limited scale, we may reasonably look forward to a large and profitable business this fall.

FREIGHTS.—There has been very little done in chartering since the date of last report. Available tonnage is in light supply, and shippers are backward in responding to the advanced rates demanded. The market is very firm, however, and rates are not likely to recede. The last transactions we hear of were the *B. Hilton* and *Sichem*, both for the west coast of England, at 57/6.

SHIPMENTS.—The shipments of deals and other sawn lumber are as follows :—

For Europe	12,896,000	Sup. feet.
" United States	2,289,000	"
" Australia	501,000	"

St. John, N.B., Aug. 22, 1881.

OSWEGO, N.Y.

AUG. 25.—The following are the quotations :

Three uppers	$42 00@45 00
Pickings	32 00@35 00
Fine, common and dressing	20 00@25 00
Common	14 00@18 00
Culls	11 00@13 00
Mill run lots	17 00@22 00
Sidings, selected, 1, 1¼ inch	30 00@37 00
Mill run, 1x10, 12 in	16 00@21 00
Selected "	20 00@25 00
Strips, 1 and 1¼ inch mill run	14 00@18 00
" " culls	10 00@13 00
1x6 selected for clapboards	25 00@40 00
Shingles, XXX, 18 inch, pine	3 75@ 3 90
XX, " "	2 75@ 2 90
XXX, 18 inch, cedar	3 00@ 3 25
XX, " "	2 25@ 2 40
Lath	1 40@ 1 40

No change in prices. Dealers are now getting forward new cut stocks. About all last year's cut has been got forward, and disposed of. The demand keeps up, and prices are quite firm. Country dealers are now satisfied that very little change can be made in prices during the season, and are buying quite freely and paying very promptly—a sure sign that they are selling at an advance.

NEW YORK.

AUGUST 15.—The present season has been one of unusual activity in this department of business. At the opening of the year, prices of the majority of goods were resting upon an extremely low basis, and with a hardening of real estate values all around, the prospects favored an extensive trade so soon as the weather was sufficiently settled to admit of preparations. The predictions that were uttered at that time, and the anticipations, have been realized to the fullest extent, as not only has the consumption of this country exceeded that for many years, but foreign countries have drawn upon us liberally, and the demand does not as yet appear satisfied. Well may people cry out that our forests are disappearing, and that but a few years only will elapse before there is an actual scarcity, for such statements are true, and the several State governments should see to it that where felling is extensively carried on planting should be encouraged to the same degree.

Never in the history of this city and its surroundings have building operations been so extensive. The island is rapidly filling up with costly and attractive edifices, and the end of the operations appears no nearer now than it did several months ago. The enormous demand for land has been the means of forcing values for such to an extreme upward point, but buyers do not hesitate, for though surface space is dear, space above is unlimited and cheap. This can be seen in the many structures that are attaining a height of ten and even twelve stories, the trouble of mounting the enormous pile being removed by the general use of elevators : in fact, the preference is given to offices high up in the world, as a cool and bracing atmosphere is assured, and the noise and bustle of the street is thus avoided.

The position of the market to-day is exceedingly favorable. Spruce, yellow and white pine, walnut—in fact all descriptions—are actively inquired for, and prices are maintained at a point that yield a very remunerative return to the manufacturer, and few, if any, express fears as to the future situation.

WHITE PINE.

Since the extraordinary foreign business in June the export demand has steadily fallen off,

but the less demand for shipment has seemingly been made good by the increase in home consumption. Yard dealers report a business not experienced before in years, and are constantly in the market to replenish the rapidly depleting stocks, and seldom make an effort to secure any concession from the prices asked by first hands. The continued strong advices from all western points, also those from Canada, have resulted in establishing an exceedingly firm market here, but no effort has been made to secure a corresponding rise to compare with the higher views elsewhere expressed, as it is said, and truly too, that this market is the last to answer to an improvement, but first to respond to a decline. The receipts from the north and west continue quite heavy on contracts made during the winter months, and the stock here is therefore kept full, offering a good assortment from which buyers can select. Freight rates from Albany remain at $1 per thousand, and are steadily maintained. The quotations in this market today are :—

THICK UPPERS—2½ TO 6 INCHES.

Good	$00 00@65 00
Fourths	00 00@60 00
Selections	00 00@55 00
Pickings	00 00@50 00
Prime shelving	28 00@30 00
Common, 12-inch	@18 00
Common, wide	19 00@22 00
Rox	16 00@27 00
Building schedules	28 00@35 00
Clear, 1 to 2 in., good	60 00
Fourths	55 00
Selections	50 00
Pickings	45 00

CHICAGO.

AUGUST 17.—The following are the quotations:

CARGO QUOTATIONS.

Joist and scantling, green, ordinary lengths	$11 00@11 50
Joist and scantling, green, 20 feet and over	12 00@15 00
Mill run, choice green	16 50@21 00
Mill run, medium, green	13 00@16 50
Mill run, common, "	11 00@13 00
Shingles, standard	2 60@ 2 70
Shingles, extra A	2 70@ 2 90
Lath	1 80@ 1 85

LAKE FREIGHTS.

Manistee	$2 12½
Muskegon	1 62½
Ludington	1 87½
Grand Haven	1 62½
Menominee	2 12½
Sturgeon Bay	2 12½
White Lake	1 75
Ford River	2 00

Receipts and shipments of lumber and shingles for the week ending August 16 :

	RECEIPTS.		SHIPMENTS.	
	Lumber.	Shingles.	Lumber.	Shingles.
1881	73,698,000	27,305,000	54,698,000	21,420,000
1880	55,596,000	22,317,000	37,520,000	7,974,000

Receipts and shipments of lumber and shingles from January 1 to and including Aug. 16:

	RECEIPTS.		SHIPMENTS.	
	Lumber.	Shingles.	Lumber.	Shingles.
1881.	1,002,154,000	420,801,000	1,043,226,000	430,730,000
1880.	814,225,000	368,483,000	816,166,000	380,185,000

TONAWANDA.

AUGUST 15.—Market brisk, sales active and prices firm. At a recent meeting of the Tonawanda and Buffalo Lumbermen's associations, in joint session, it was decided to advance the prices of pine lumber to correspond with the increase at the western mills and other leading markets. The figures have therefore been raised $1 per M. on all grades below shelving ; $2 per M. on shelving and higher grades. The terms have also been changed from 2 per cent. to 1½ per cent. discount for cash, or 60 days. Dealers here are feeling buoyant over the prospects, and trade continues brisk.

CARGO LOTS—SAGINAW INSPECTION.

Three uppers	$40 00@45 00
Common	17 50@20 00
Culls	11 50@12 50

BUFFALO.

AUGUST 15.—The following are the latest quotations for cargo lots :—

Uppers	$40 00@50 00
Common	17 00@20 00
Culls	13 00@14 00
Dressing stocks	18 00@20 09
Dressing sidings,	17 00@19 00

Cured of Drinking.

"A young friend of mine was cured of an insatiable thirst for liquor, which had so prostrated him that he was unable to do any business. He was entirely cured by the use of Hop Bitters. It allayed all that burning thirst ; took away the appetite for liquor, made his nerves steady, and he has remained a sober and steady man for more than two years, and has no desire to return to his cups, I know of a number of others that have been cured of drinking by it."—From a leading R. R. Official, Chicago, Ill.—*Times.*

GLASGOW.

Singleton, Dunn & Co.'s monthly timber circular, dated Glasgow, 11th August, says :—

Imports are larger than at the corresponding date last year. This is owing to the earlier arrivals this season, the spring fleet being oomplete ; while last year it was well on in August when cargoes came forward. Business continues very languid, and notwithstanding the enhanced values at Quebec, operations here are on a very restricted scale. At several auctions of timber at which fresh timber was offered, it was difficult to effect sales, even when sellers were willing to meet buyers. In these circumstances it is clearly the interest of shippers to curtail supplies, as an undue augmentation of stocks must necessarily check speculative business and depress prices. North of Europe goods are much weaker than in the spring, and for battens and deals very low rates are accepted.

BOARDWOOD—Waney.—Some good 20-inch average was placed at 2s. 4d., and a small quantity of 17-inch prime at 2s. per cubic foot. The stock on hand is unduly heavy, and will no doubt make it difficult to realize even fair rates. The consumption is an average.

WHITE PINE.—Owing to the holidays little enquiry has arisen, and we have heard of no transactions. A considerable quantity of deck plankwood was sold to arrive, Some 50 feet average lengthy joisting wood was sold at 17½d., and a parcel of nice 35-40 cubic feet fair average at 15d. per cubic foot. A line of g.f.a. 70 cubic feet, last season's import, was closed at 18d. per cubic foot.

RED PINE.—The demand is unusually dull, and sales that were made were at low rates—14d. to 15d. for 30 to 35 feet, and 15d. for some extra fine 22 cubic feet average. The stock on hand is extraordinarily large, and should not be increased.

PITCH PINE.—The import has been very heavy, and as the consumption was only about an average, we are now left with a full stock. Sawn is not excessive, but hewn is far beyond the demands of the trade. Prices have been fair for sawn—say for selected sizes 17d. per cubic foot, and for quantities 30 to 35 feet average 15½d. to 16½d. per cubic foot. A parcel of 35 feet average contract wood was placed at equal to 16½d., and a parcel of 40 feet average at 17d. per cubic foot. Some other sales were made at as low as 16d. to 16¼d. for 40 cubic feet average. Hewn.—A quantity of large average, comprising mast and spar pieces, was placed at 17d. to 18d. The ordinary sizes, 70 to 80 feet, are very dull of sale. Planks.—Almost no demand.

ELM.—The consumption was very restricted, and consequently a large stock is now on hand. A small quantity of old 30 feet average was placed at 18d., and a small lot of 50 feet average prime at 2s. per cubic foot.

OAK.—Too much of last season's woods remains on hand, and as the railway companies have parcels forward on contract, the prospects for wood on the market are not encouraging.

BIRCH.—Stock is ample, and contrary to expectations, the demand is dull. A full supply of lower port and Quebec wood is now here.

ASH.—Some inches 14 and up sold at 2s. 1d. to 2s. 2d. Demand dull meantime.

WALNUT.—For prime and large an average of 5s. to 5s. 4d. per cubic foot was made.

DEALS.—1st Pine—Dull, except for extra specifications. Very low prices—21d. to 22d. per cubic foot have been taken for 7 to 9 inches. The stock, consisting mainly of oddments, is by far too large. 3rd Pine—Quebec—The consumption of these is light and prices low—at Greenock 1s. per cubic foot, and at Glasgow 13d. per cubic foot for standard sizes. 4th Quebec Pine of long specification was sold at 11½d. per cubic foot. Lower Port Pine—The stock is light, but as most of the dealers have cargoes on contract, it is improbable that high prices will be got for market cargoes. Quebec reds are very unsaleable, except at very low rates. Spruce—The demand was good, and prices were well sustained. The last auction was of a cargo per steamer from St. John, which sold readily at from 10½d. to 11½d. for 9 inches and up, with 9d. for 7 inches, and 9¾d. to 10d. for 8 inches. The lateness of imports from Riga has assisted the sales of Canadian spruce.

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Extra Stretched and Patent Smooth Surface

RUBBER BELTING—in Stock, 2, 3, 4, 5, and 6 Plies.
HOYT'S CELEBRATED LEATHER BELTING.
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Steam Packing of all kinds, Rubber and Linen Hose, Silk Bolting Cloth, Emery Wheels, Lacing Leather (Page's Genuine), Lard, Seal, Cylinder, Spindle, West Virginia and Wool Oils. Our Stock includes Mill Supplies and Rubber Goods of all kinds. Quotations furnished for any part of Canada. 21

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HON. JNO. McMURRICH, Vice-Pres. A. F. JONES. Secretary-Treasurer. 1yL17

BRACEBRIDGE.

To the Editor of The Canada Lumberman:

AUG. 22.—Lumbering has been at a standstill here for some time past, but is beginning to move again, several parties having sent a few men each into the woods, and judging from the way standing timber has been selling, there will soon be a rush. There was a gang left here this morning for the north shore of Lake Huron to make board timber. Men are very scarce and wages high. No doubt they will be more plentiful when the harvest is over. The last of the drive is over Muskoka Lake ; it has been very slow this summer, and will be late when the last reaches Georgian Bay, but the mills are all well supplied now, and will without difficulty be kept so.

Edward Marlow, "hewer," had his arm broken on Saturday last by a kick from a horse at Port Sydney.

I hope before next issue that I will be able to report more lively times here.

A CANADIAN VIEW OF BIRCH.

A Toronto, Ontario, newspaper man interviewed several lumber dealers and furniture manufacturers on the scarcity of walnut, and all were unanimous in saying that the only good substitute is black birch, which is rapidly coming into favor. Black birch is a close-grained handsome wood, and can easily be stained to resemble walnut exactly. It is just as easy to work, and is suitable for nearly all purposes to which walnut is at present applied. Birch is much the same color as cherry, but as the latter wood is now so scarce, and consequently so dear, the dealers do not take much stock in it. It is with difficulty that cherry wood can be obtained at $50 per thousand feet, while birch wood can be purchased at any saw-mill for $16. When properly stained it is almost impossible to distinguish the difference between it and walnut, as it is susceptible of a beautiful polish, equal to any wood now used in the manufacture of furniture. When it became known throughout the United States and Canada that the supply of walnut was almost exhausted, the dealers set their brains to work to find a substitute, and now since birch has been thought of the price is slowly advancing.

In the forests through Ontario, birch grows in abundance, especially if the land be not too boggy. There is a great difference in the wood of different sections. Where the land is high and dry the wood is firm and clear, but if the land where the wood is grown be low and wet, the wood has a tendency to be soft, and of a bluish color. In all the northern regions it can be found in great abundance, and as the trees grow to such a size, little trouble is experienced in procuring a large quantity. The forests in the Manitoulin Islands abound with it as well as those of the Peterborough and Haliburton districts. The Muskoka district also contains a plentiful supply.

During the past few years large quantities of this wood have been exported from tne Province of Quebec at a low figure, but this will be stopped when it is known that it is to take the place of walnut in the near future. It is easily detected among other trees on account of its height, large trunk, and the peculiar color of its coarse bark. Most of the perforated chair bottoms now in use are manufactured from it. There is a species of bird's-eye birch, but it is very scarce and is not more valuable commercially than the plain woods. In consequence of the prospect of its speedy substitution for black walnut, it should be husbanded with the greatest of care. An evidence of the weight and solidity of the wood is the fact that it will sink after being a few days in the water. This fact is a slight drawback to the work of having it conveyed to the saw-mill. One of the principal means resorted to is binding it together with pine logs, and thus it is brought to the mill, but pine cannot always be found where birch grows, and it is then necessary to haul it, sometimes a great distance, with the aid of horses.—*Northwestern Lumberman.*

The Timber Line of Mountains.

Some very interesting facts were brought out at a meeting of the Academy of natural science of Philadelphia, concerning the timber line of mountains. The highest Alpine vegetation consists for the most part of short stemmed perennials. Lower down are dwarfed trees of species which still lower down the mountain sides form forests of considerable height, and which, as trees suited to merchantable purposes, make what is known to mountain travellers as timber lines.

In the mountains of Colorado the forests commence at about 7,000 feet above sea level, and continue up to about 11,000 feet, when they suddenly cease. At this point the coniferous trees are from 30 to 40 feet high, and above the same species exist as stunted shrubs seldom exceeding three or four feet in height and often but a foot, through trailing widely over the ground. In the dwarfed condition they they are often found some 1,500 feet higher up, or half way from the recognized timber line on the top of the mountain.

On Mount Washington, in New Hampshire, which is a little over 6,000 feet high, the timber runs up about 4,000 feet, while Mount Webster, a mountain forming the southern peak of the same chain, and about 4,000 feet high, has little timber above 3,000 feet. Roan Mountain, in North Carolina, is about 5,300 feet above the level of the sea and on some parts of the timber extends to its summit. At a height of 5,000 feet black oak was measured that was five feet in circumference and three feet from the ground, and 40 feet high.

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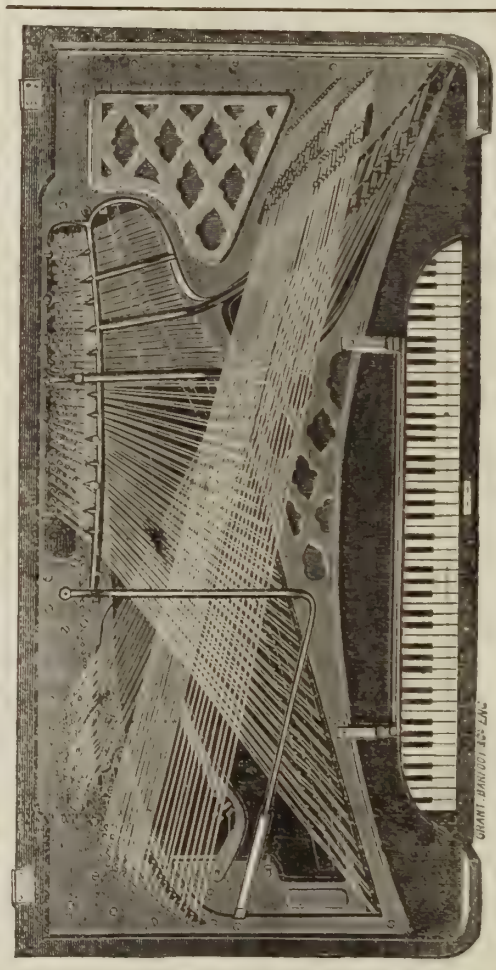

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EMERY and CORUNDUM WHEELS

These Wheels are Wire Strengthened

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Neither Animal nor Vegetable Glue or Gum being used in their composition, they are NOT LIABLE TO HEAT, and give out no Odors, while

They Surpass All Other Wheels for Free Cutting and Durability.

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Best Cast Steel, Warranted.

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Wrought Iron Shanty Cook Stoves

The Best Article ever offered to the Trade.

I have much pleasure in drawing attention to my **WROUGHT IRON COOKING STOVE, for Shanty, Hotel and Boarding House use.** These Stoves are made of **Heavy Sheet Iron,** the top and lining of the fire-box being of **Heauy Cast Metal** and all the connecting parts of substantial **Wrought Iron Work.** The dimensions of these Stoves are as follows :—

SINGLE OVEN STOVE

Top surface contains six 10-inch holes, with ample room between, and one oven 16 x 24 x 26.

DOUBLE OVEN STOVE

The Double Oven has a top surface containing twelve 10-inch pot holes, with two ovens, each 16 x 24 x 26. One fire-box of suitable size for area to be heated. Below will be found Testimonials from some of the leading Lumbermen, who have used my Wrought Iron Cook Stoves since I ommenced manufacturing them. They are the names of gentlemen who are well known and eliable, and will carry more weight than any recommendation of my own could do.

The Best Stove I have ever Used.

PETERBOROUGH, May 31, 1880.

ADAM HALL, Esq., Peterborough. Dear Sir,—I have used your Wrought Iron Cooking Stove in our lumbering operations since its introduction here, and have no hesitation in saying that I prefer it to any other. For durability, economy and efficiency, where a large number of men are employed, it is the best stove I have ever used. You can, with confidence, offer it to hotels, boarding houses and lumbermen.

Yours truly, THOS. GEO. HAZLITT.

The Stove for Lumbermen.

PETERBOROUGH, June 1st, 1880.

ADAM HALL, Esq., Peterborough. My Dear Sir,—We have used your Wrought Iron Cooking Stove and find it is very satisfactory for lumber operations, especially so on drives. We can recommend it highly.

Yours truly, IRWIN & BOYD,

Gives the Greatest Satisfaction.

PETERBOROUGH, June 3rd, 1880.

A. HALL, Peterborough. Dear Sir,—I have had the Wrought Iron Cook Stove, purchased from you, in constant use ever since last fall, and it gives the greatest satisfaction in every respect. I can recommend them highly to any one who is in the lumber business. Very truly yours, GEO. HILLIARD, M.P.

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All the necessary TINWARE and CUTLERY for Shanties suppied at the Lowest Prices.

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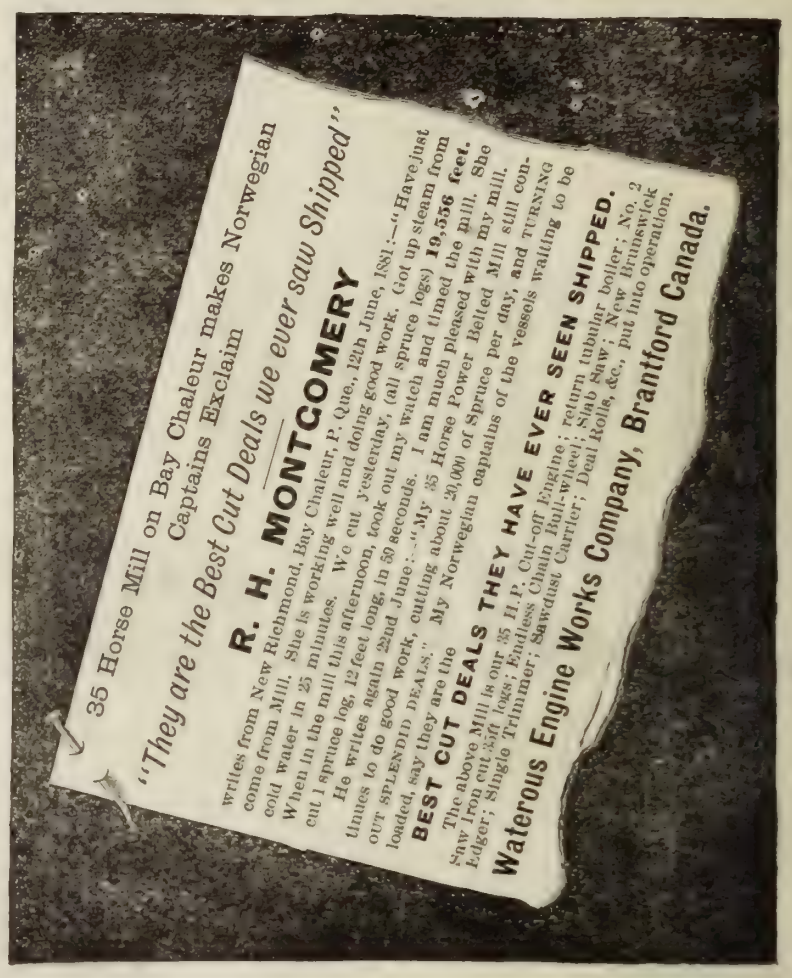

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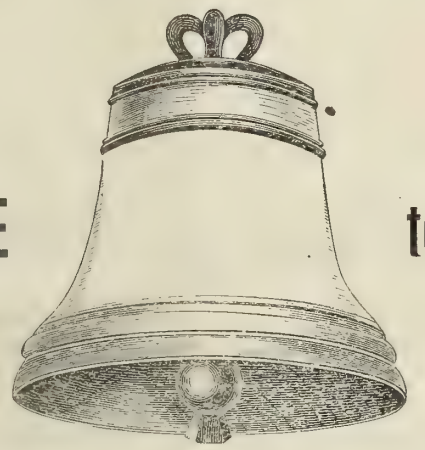

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EMERY WHEELS FOR SAW GUMMING!

Solid Emery Wheels are now almost in universal use for the purpose of gulletting and gumming saws. Statistics show from 25,000 to 30,000 saw-mills in the United States. Many of these run only a single saw each. A one-saw mill would use one or two wheels a year, costing $3 to $4 each, and when such small mills order single Emery Wheels from the factory, the express charge often equal the cost of the wheel. There was a time when the quality of Emery Wheels was so uncertain, and the demand s fickle, that storekeepers could not afford to carry them in stock. Now, however, Saw Gumming Wheels have become as stapl an article as Files, and every dealer in saws, Hardware and Mill Supplies can afford to carry a few dozen standard sizes in stock Large dealers order stocks of $500 to $750 worth at a time. Saw Gumming Wheels are used with the edge (or face) square, round or beveled. Probably seven-eigths of all in use are beveled.

The principal sizes are:

8x1/4, 8x3/8, 8x1/2 — 3/4 in. hole. 10x1/4, 10x3/8, 10x1/2, 10x5/8 — 3/4 in. hole. 12x1/4, 12x3/8, 12x1/2, 12x5/8, 12x3/4, 12x7/8 — 3/4, 7/8 and 1 inch. Holes,

Probably more wheels 12x3/8, 12x1/2 and 12x1/4 are used than all the other sizes together. Saw Gumming Wheels are used, however, of all sizes up to 24x1½. The most frequent complaint is that Emery Wheels harden the saw so that a file won't touch it. The answer is that you don't want a file to touch it. An expert workman will shape and sharpen the teeth with an Emery Wheel, leaving the teeth *case hardened*, in which condition the saw will cut about 33⅓ per cent. more lumber than a soft saw will. Those who want to use the file, however, have only to touch the saw *lightly* a second time (after going all over it once), and this second touch will cut through the case-hardened scale.

A QUESTION OF QUALITY.

Thirteen years of experience as makers of, dealers in, and actual users of Emery Wheels, have led us to a decided opinion as to what quality is the best. We prefer for almost every use an "Extra Soft" wheel like the "Pocono." We believe that money lost through the rapid wear of the wheel is more than made up by the money saved on wages. As we cannot get every one to adopt our views, we make several qualities, so as to meet their views. We say to those who think they can only be satisfied with some other make of wheels (not Tanite), that we can furnish qualities *to match* any and every other make. If you have got used to some special quality of wheel, let us know what it is, and we can send you *a Tanite Wheel of similar quality*. Our *regular* classification of Saw Gumming Wheels is as follows:

CLASS 2. MEDIUM—HARD.—This Wheel is THE STANDARD Saw Gumming Wheel all over the world. Probably seven-eighths of all the Saw Gumming Wheels used are "Class 2." It cuts fast and keeps its shape well. Some think it too hard, some too soft. We prefer the "Pocono."

CLASS 3. MEDIUM—SOFT.—The same as to coarseness and fineness as "Class 2," but a *softer*, and therefor freer cutting wheel.

CLASS "POCONO." EXTRA SOFT.—This Wheel we prefer to all others. It is both *finer* in grain and softer than either of the above. As a Saw Gumming Wheel, Class "Pocono" is specially suited to those practical and experienced Sawyers who know how to grind with a light touch, and who want a free cutting wheel that will not create much heat.

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I would also call special attention to my

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and for STEAM MILLS, would recommend the Steam Feed, having put in several which are giving the best of satisfaction, as will be seen by the following testimonials:—

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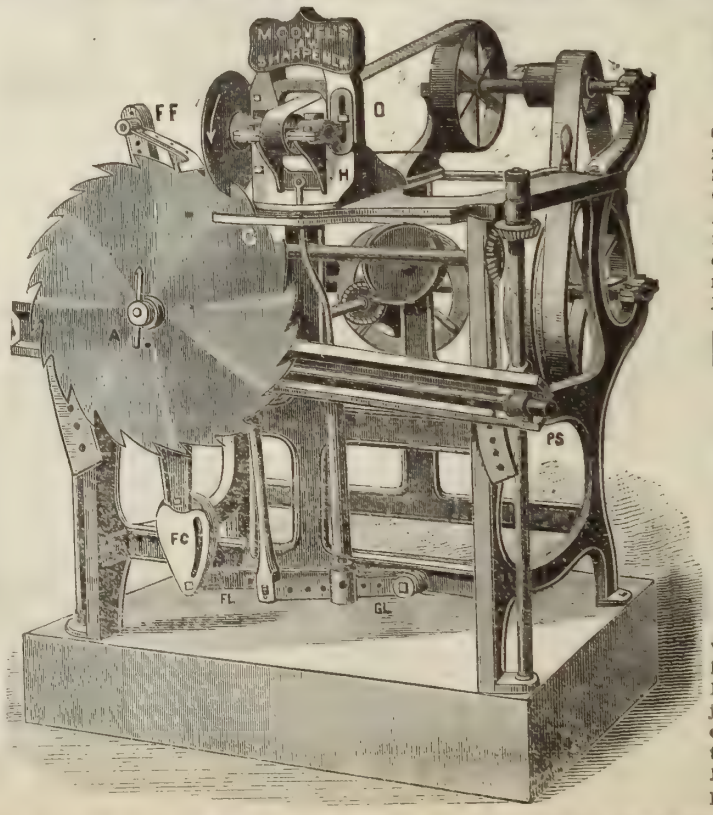
Yours respectfully,
WILLIAM TAIT,
Lumberman, Gravenhurst.

TORONTO, August 11th, 1880.

WM. HAMILTON, Peterborough, Ont.

DEAR SIR—The Steam Feed you put in is working splendidly. Yours, &c.,
THOMPSON, SMITH & SON.



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I am also manufacturing Saw Mill Machinery, for all sizes of Gang or Circular Mills, Span or Double Circulars for Slabbing Small Logs. My Patent Jack Chain for drawing logs into Saw Mills, acknowledged by all to be the Cheapest and best ever got up; also, my Patent Lumber Markers, different sizes of Edgers, Gang Lath Mills, Trimmers, Power Gummers, and all Machinery used in a first class Gang or Circular Saw Mill; also, small Hand Gummers for use in the woods, for Cross-cut Saws. Rotary Pumps of different sizes, for Fire Protection in Mills, &c.

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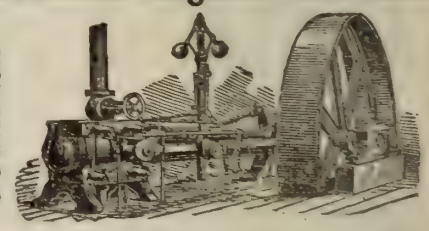
CORLISS ENGINES



Where economy of fuel is the great consideration, along with uniformity of speed, such as is required in Grist and Flouring Mills, Woollen and Cotton Factories, or large Factories of any kind, I supply the Corliss Engine. I feel justified in saying that our Style, Workmanship and Finish on this Engine will be no discredit to its renown, and certainly is not equalled in this country for economy of fuel. I have them working at 2½ pounds of coal per horse-power per hour.

L10

WILLIAM HAMILTON,

PETERBOROUGH, ONT.

THE CANADA LUMBERMAN

AND MILLERS' MANUFACTURERS' AND MINERS GAZETTE

PUBLISHED SEMI-MONTHLY.

The only Newspaper devoted to the Lumber and Timber Industries published in Canada.

SUBSCRIPTION $2.00 PER ANNUM.

VOL. 1. PETERBOROUGH, ONT., SEPTEMBER 15, 1881. NO. 22.

THE Ottawa *Free Press*, of August 29th, says that quite a quantity of lumber is being shipped to the United States by McClymont & Co. per St. Lawrence & Ottawa railway. Twelve cars laden with sawn lumber left from the siding near the engine house across the Rideau to-day. More will follow during the week.

The *Mississippi Lumberman* says that a sale of 1,000 acres of pine land on the St. Louis river for $12,500 occurred last week. The purchase was made by Mr. Fowler, of Saginaw, Mich. The price is the highest ever paid for timber in that region, but if any body understands the value of pine trees it is Mr. Fowler, who for years has been an extensive operator on the Hudson shore.

THE boom in timber lands extends to Pennsylvania. A journal of that State says:—Hon. Samuel Calvin, of Hollidaysburg, recently sold the timber right on a tract of land in White township, Cambria county, for the snug sum of $45,000. The same tract, timber and all, was bought, it is stated, a number of years ago by that gentleman, from a gentleman of Ebensburg, now deceased, for the sum of $1,000.

A QUEBEC despatch of last week described arrangements as completed by Messrs. Allan, Grant & Co., of Ottawa, to ship to that city a large number of cars of square timber. A switch will run on the Custom House wharf to accommodate the first cargo, which when arrived will be thrown into the pond alongside the wharf, enclosed by a boom, and then rafted and towed to the cove of Messrs. Cook Bros. & Co.

SURVEYS of public lands now being made in the San Fernando and Catalina mountains have disclosed the fact that there are large tracts of table lands in those mountains, embracing several hundred thousand acres of the very best white and yellow pine, from twenty inches to three feet in diameter. There are groves with an average height of seventy to one hundred feet. The Texas Pacific and Atchison, Topeka & Santa Fe railroads will traverse this region, and make it valuable as a source of supply for southern Arizona, Sonora and Chihuahua.

THE report of the Government cinchona plantations in Southern India indicates the astonishing progress made since slips of this valuable tree were first planted in that district twenty years ago. The number of trees now planted out is more than four and a half millions. At present the greater part of the bark produced appears to be consumed in supplying the medical depots at Calcutta, Bombay and Madras; but upward of 3,000 pounds was last year sold to the public, and the annual yield is rapidly increasing with the growth of the trees. The actual profit last year on the capital of the plantation is stated to have been eight per cent.

THE Nova Scotia Glass Co., New Glasgow, have just placed an order for 10,000 boxes to pack the goods of their manufacture. This means the cutting up of some 250,000 feet of lumber. The company are pushing their works forward, and they confidently anticipate being able to make glass Monday week. The crucibles have just been set.

MR. S. P. BENJAMIN, of White Rock Mills, Kings Co., N. S., has started at that place a barrel and box factory for making boxes and barrels for the putting up of apples and plums, etc. He has put in improved machinery, and is able to turn out 240 barrels a day, besides boxes. Next year Mr. Benjamin intends putting in machinery that will turn out at least 60,000 barrels, saying nothing of boxes, which he can furnish to an unlimited extent.

A HARRISBURG, Penn., paper says:—The maple and hemlock forests of Pennsylvania have never had the benefit of the right kind of enterprise to render them as important and productive as their real value ought to produce for them. The maple wealth of Pennsylvania is as valuable as that of her black walnut, if properly handled, because the wood is hard and can be utilized to as beautiful effects in building and furniture as that of walnut or ash. This wood grows to enormous abundance in this State, and will sooner or later become one of the most profitable sources of industry for those who know how to put it on the market.

THE *Timber Trades Journal*, of August 13th, says:—There was a goodly array of shipping reported the last week, both in London and Liverpool, laden or partly laden with timber goods, and those who have been apprehensive of short supplies, will be much cheered by the increasing importation. It is remarkable too that just half of the arrivals at Liverpool were by steamships, and for the first time in London, in a busy import month, *more than half* were steamers—of 60 timber vessels reported 31 were steamships, one more than half. In Liverpool, of 33 arrivals 16, or barely half, were steamers. Heretofore we have seldom known more than a third of the arrivals steamships.

Celebrities.

It is worthy of note that amongst some of the men who have risen from the ranks of industry are the late Rev. Dr. Morley Punshon, a timber merchant's clerk, Ben Johnson, a bricklayer, Carlyle, the son of a stonemason, Socrates, a statury, and Robert Burns, a farm carpenter and laboring rustic.

THE GREATEST POPULARITY OF DR. FOWLER'S EXTRACT OF WILD STRAWBERRY is where it has been longest known. Time cannot detract from its merits. It is the oldest reliable remedy for all bowel complaints incident to the summer season.

WHAT BURNS THE MILLS.

With the opening of the season the saw-mill proprietor enters not only upon a period of active labor in the production of lumber, but upon a season fraught with the gravest apprehensions. If he could be about the mill through the night as well as through the day, and were he endowed with powers that did not need to seek recuperation in sleep, he could rest somewhat easy in his mind as he contemplated the risk attaching to his property, in the contemplation of the fact that his own eternal vigilance would prove the price of his safety from the danger of fire.

Careless engineers and faithless watchmen are about the most dangerous things to be found about a mill. The former allows the sawdust to accumulate about the furnace doors or hearth, and if the truth were to be known about many a saw-mill fire, it would be found to have its inception in this scattered sawdust, which ignited while the engineer had "just stepped out of the fire-room for a minute." His call outside proves a most dangerous minute for the proprietor, though the resultant destruction could have been averted if the hearth had been swept before he stepped out. Probably two-thirds of the fires which destroy saw-mills in the day-time arise from this cause. It is no uncommon thing to see the engineer of a saw-mill bank up his hearth doors with sawdust when he shuts down at noon and goes to his dinner. Such an engineer is a most excellent subject for discharge from a man's employ, for if the mill does not take fire the first time he does it, the old adage about taking the pitcher to the well once too often is pretty sure to be verified before the season is over.

Night fires are more usually the result of a too implicit confidence in the watchman than many suppose. We would not assert that all watchmen are unfaithful, but experience has proved the value of a proprietor s call at the mill at unseasonable hours of the night. If you find a wide plank or two laying across the top of your boilers, or suspiciously near the arch, you may be pretty sure that a quiet visit to that locality in the small hours of the night, will find them occupied by a lodger whom you have paid to walk around and see that no merauders are threatening your property, and no incipient blaze is endangering its safety. It is a good thing to have an energetic man in your employ, but when you find your watchman always ready to fill an extra place during the day, and apparently able to do without sleep for an indefinite length of time, you can be almost positively sure that what sleep he dispenses with in the day time is taken at your risk during the night. It is well known to be suspicious of the faithfulness of the man who can watch all night and every night, and grow fat on it, while working half or three-quarters of the time during the day. It is at least a good plan to visit him when he least expects you, for by such visits you can often reduce the amount of your apprehension, if not the actual premium of your insurance.

The spark-catcher on your smoke stack may be all safe enough, for practical purposes; but when you find a little patch of fire here and there through the mill yard, on a hot day, it will pay handsomely to call in the boiler-maker, or set your engineer at work to make the meshes smaller, or to put up a new wire screen in place of the damaged one, which will warm you some day with a hotter blaze than is healthy or profitable. Your fire-pump may be a first-class one; but when you go into a mill and see a row of empty water buckets in the rack on the saw floor, you can rest assured that if a fire ever starts on those premises, the fire pump will be of very little service. Empty buckets are a pretty sure sign of lazy engineers and mill foremen, and disabled pump. Unfortunately, when a fire starts on saw-mill premises, it is usually in too much of a hurry to get through the contract it has taken in hand to allow a machinest to be sent for to put the pumps in order, or to repair the hose which has been hanging on a peg in the wall until it is ready to drop to pieces from decay. The truism that a "stitch in time saves nine," has often been correctly rendered, "a full bucket of water saves the mill." With the record of saw-mill fires daily increasing, it well becomes all who are interested in this class of property to give the subject of its safety from fire a little of the care that is taken to obtain a full stock of logs, or an extraordinary cut by the saws.—*Monetary Times.*

Hints Concerning Saws.

A saw just large enough to cut through a board will require less power than a saw larger, the number of teeth, speed and thickness being equal in each. The more teeth the more power, provided the thickness, speed and feed are equal. There is, however, a limit, or a point where a few teeth will not answer the place of a large number. The thinner the saw the more teeth will be required to carry on equal amount of feed to each revolution of the saw, but always at the expense of power. When the bench saws are used, and the sawing is done by a guage, the lumber is often inclined to clatter and raise up the back of the saw when pushed hard. The reason is that the back half of the saw, having an upward motion, has a tendency to lift and raise the piece being sawn, especially when it springs and pinches on the saw, or crowds between the saw and the gauge; while the cut at the front of the saw has the opposite tendency of holding that part of the piece down. The hook or pitch of the saw-tooth should be on a line from one-quarter to one-fifth for a softer timber. For very fine-toothed saws designed for heavy work, such as shingles, &c., even from soft wood, one-quarter pitch is best.—*Lumber World.*

TERRIBLE BUSH FIRES.

THOUSANDS OF SQUARE MILES BURNED AND LAID WASTE.

DETROIT, Sept. 9.—The accounts which are hourly coming in as to the ravages of the forest fires show that there has been very little, if any exaggeration in the matter. The high winds that prevailed cut off nearly every means of escape. Large burning masses were lifted up and borne to great distances, starting fires in fresh places, and adding to the destruction. At Freeing the unfortunate people, most of whom are Poles, were caught in a fire-trap, and literally roasted alive, together with their cattle and horses. As a rule they were all new settlers. Numbers of them, blinded by the smoke and crazed by the fury of the flames and the agony of their sufferings, either died of their injuries or committed suicide. At least 300 are supposed to have perished.

The following villages have been completely burned down :—Bad Axe, Verne, Forest Bay, Richmondville, Charleston, Anderson, Deckerville, Harrisville, and Sandusky. The following have been partly burned :—Port Hope, Minden, and Ubbey. The loss in the villages is as nothing to that in the country, which is simply incalculable. The exact loss of life cannot yet be adequately ascertained, and the amount of damage done to property can only be roughly estimated.

At Paris, near Port Sanilac, up to last night, forty-five corpses, nearly all those of Poles, were found within a mile, many persons being still missing. In the whole settlement there is not one building left. Houses, crops, fences, all have disappeared.

South of Forestville from the lake back seven miles not one house is left to the square mile.

One man at Cato loses $40,000 in grist mills, store and hotel. Here the settlers are nearly all Germans, and newcomers, and all have been burned out. The fire swept their property off like a hurricane, and drove many of them like sheep into the lake, where they perished miserably.

In Deleware township the people and cattle crowded to the lake shore. Men, women, and children have lost even the clothes they stood up in, and the unfortunate cattle have had their very hides burned through.

In Huron county the same has happened. One man driving through Huron county directly after the spread of the fire, reported that he had met five women entirely naked, each carrying a child. He gave them two flour bags to cover themselves with. A farmer saved his family, consisting of his wife and eight children by taking refuge in a field of buckwheat. A poor woman in his neighbourhood endeavoured to save herself and children by digging a hole and covering them as best she could with her hands. They were all subsequently found dead. The little ones had their heads burned off to the shoulders. The loss of cattle and animals is immense. Twenty head of cattle were found in a half-acre lot dead. Animals are strewed in all directions.

In addition to the dead, which are estimated at from 700 to 1,000, fully 5,000 persons have been rendered homeless, of whom many are absolutely without shelter.

Near Sanilac township, northwards, the people did not know any fire was near them until it was on them, and all had to run for the lake, and it being but a short distance all reached it in safety. John Kerr and family were asleep when their building caught, and a neighbour seeing it ran and woke them, and they succeeded in saving their house, but lost all else.

Mrs. W. Burgess got seperated from her husband and lay all night in a ditch. Another person laid down in a mud-puddle and rowled over all night. Large parties of men have been detailed to bury the dead animals less their corpses should breed a pestilence. The task of burying the human beings has in many cases been left to strangers, of whom one man reports that he saw 116 persons burned. In one place he saw four wagons bearing eight coffins, and one man walking behind alone. It was his entire family. Another man was following three coffins.

The whole of the Sanilac burnt region has been traversed by Rev. Z. Grenfell, Jr., pastor of the First Baptist Church here. He reports that the herald of the approach of the fire was darkness and a copper-coloured appearance of the sky. Later it changed to a deep red, and by two o'clock on the afternoon of Monday it became so dark that lanterns were a necessity in order that people might find their way out of doors. Mr. Grenfell relates the story of a Mr. J. Jenks, who said that the darkness was so intense that in passing his hand before his face it could not be seen. In the woods were many dead of every age, and presenting the revolting appearance of bodies which are scorched and charred by fire. The skill and courage of men seemed impotent to cambat such flames, and the fleeing people were caught in fire traps and roasted as were their live stock. Mr. Grenell tells of one farmer who was ploughing with his oxen a few miles from Sand Beach, who, perceiving the approaching darkness, started for his house. Reaching their he fouud that his wife had gone to a neighbour's. He took two children and gave three others in charge of his eldest daughter. Before travellng many rods they found themselves cut off by the flames. He turned in another direction and escaped with two children; the three children and the daughter were found the next day all of a heap and charred beyond recognition.

William Humphrey, a mail carrier between Argyle and Elmer, started on his route on Monday. Midway he was stopped by the flames, and unhitched his horse from the waggon. Mounting his horse with the mail bags he turned hastily back. The horse found its way back to Argyle without mail-bag or rider. A tag was tied to his main and he was urged back over his usual route. He reached Elmer, but Humphrie's body was found buried in the woods in one place and the half consumed mail-bag in another. The wagon was found reduced to cinders.

At Port Huron the following appeal has been published by the authorities :—

"Our country has been devastated by fire. The suffering is beyond description—people in a starving condition. Will the people of Canada lend aid ? We need seed wheat, provisions and clothing. Orders have been received from the Secretary of the Treasurer that all goods for this purpose will pass free of duty."

THE PARRY SOUND FIRES.

The district of Parry Sound has passed through an experience during the past three weeks which will never be forgotten by the inhabitants, who have been kept in constant dread of the flames which day and night have covered the sky with volumes of smoke so dense that the sun has never appeared but as a great red ball, shorn of its brightness though not of its heat. No rain has fallen of any account since June, and under the intense heat even the streams of this well-watered district have failed. From Mr. J. C. Miller, M.P.P. for Muskoka, who is the head and chief proprietor of the Parry Sound Lumbering Company, a *Globe* reporter has obtained as reliable information as is at present available on the extent of the fires and the destruction caused by them.

What the destruction is, he says, will not be known until the smoke clears away, for the fires are still burning in every direction, and a strong wind, which may at any time spring up, may increase tenfold the devastation wrought thus far. The fires burn in every direction, and there is scarcely a square mile out of more than two thousand in this area but is sending up its contribution to the great pall of smoke which lays over the land. Beyond the multitude of minor fires which at any time may develop into great conflagrations, there have been five or six great fires which have come prominently under his notice. The first of these was started by a settler in the township of Fuller, in the month of June, on the north-western road, a few miles from Parry Sound. During the drought of July this fire burned in an easterly direction over a belt from half a mile to a mile in width across the northern part of the township of Macdougall, and after devastatating the lands of the Parry Sound Lumbering Company, passed into the township of Ferguson, sweeping away a large area of forest in the limits of the Ontario Bank. An east wind then drove it back into the township of Cutting, where it is now raging. In all this fire has burned over 15,000 acres of very fine timber country.

Another fire on the Shawanaha River has swept over the larger portion of the township of that name.

A fire broke out lately on the Nashcoutcong River near Bying Inlet, and burning along both sides of the stream, ran south through the townships of Wallbridge and Harrison, enveloping both these townships in flames.

TWO HUNDRED MILES OF FIRE.

Along the Georgian Bay the Maganetawan Lumber Company have lost heavily by a fire which commenced three weeks ago and burned along a length of thirty miles of coast by a distant island not yet known but probably from six to ten miles, or over two hundred square miles of territory. It is still burning.

THE TOWNSHIP OF MILLS.

A very destructive fire originated apparently in a criminally careless manner has swept the township of Mills. It was started for the purpose of facilitating the repair of a Government colonization road. It is stated that Mr. Kelsey, who superintends the repairs on the north road, refused to start the fire, as he did not know, the weather being so dry, what destruction it might cause. Mr. D. M. Card, Road Inspector, it is reported came along and, notwithstanding Mr. Kelsey's remonstrances, gave prematory orders that the fire should be started, saying that they "must build the road and let the fire take its chances." It took its chances, and besides burning out the crops and buildings of a Mr. McVitte destroyed twenty-five square miles of splendid timber yet unsold by the Government. Mr. McVitte, it is said, has issued proceedings against the Provincial authorties for the destruction of his property.

In the vicinity of Parry Sound a fire was set on an island either by a camping party or by the Indians. The fire leaped across the islets to the mainland near the Boyne River, and worked its way up to within two hundred yards of the Ontario Bank Mills, which were saved with much difficulty on Monday; the wind carried it south east across the Parry Sound Road in an old barn. The east wind on Wednesday and Thursday drove it back towards the Village of Parry Sound endangering the village, and the large establishment of Wm. Beathy and the Parry Sound Lumbering Company. A telegram yesterday morning said the danger was over. The loss by these fires is already about $20,000, and the Ontario Bank Mill loss nearly as much.

It is reported that over 3,000,000 feet of saw logs owned by Cook Bros., and others have been burned in the dried up bed of East River, in the township of Chaffey, but the exact truth regarding this is not yet known.

By these great fires between three and four hundred square miles have certainly been burned, but there are fires yet unreported which may add greatly to the area. They still burn and at any hour may sweep much of the territory that remains. The gum forests on good land are rarely destroyed, the fires confining themselves mainly to rocky districts, green timber, and old areas burned in previous years. The loss of life thus far has been nothing so far as learned, and while elsewhere hundreds of farmers are burned out, the writer has heard of only one, McVeth, in the township of Mills, who has lost everything, including a saw mill. Fences have everywhere suffered on the farms, and it has been only by long continued fighting night and day with all the available forces that could be gathered together that the flames have been prevented from sweeping the country. In timber the loss has been enormous, and thus far can scarcely fall short of one million dollars.

The pine which is burned over, unless stripped of its bark before spring, will be attacked by the pine bores—Pissodes Strobi—a grub about two inches long and a quarter of a inch thick. This borer is furnished with a auger-like probosces, with which it bores right through a tree. The noise of the boring is quite audible. The borer only attacks burned, fallen, or decaying trees, the beetle never depositing its eggs under the bark of a dry tree. Scarcely one out of all the trees now damaged by fire will escape destruction or serious injury from this borer.

In regard to fires Mr. Miller thinks that legislative action is necessary. The present law is a failure, and steps should be taken to secure a better one compelling any farmer who wishes to clear a fallow to obtain first the permission of the stipendiary Magistrate of the district, who would if he considered it safe to grant the settler's request notify by letter all the timber limit holders of the neighbourhood of the fact. A precaution could likewise be taken by notification in some way of neighbouring settlers. If nothing is done, the loss from fires in future will be enormous.

Mr. Miller could give no information of a definite character regarding the great fires in Muskoka, not being at all familiar with them.

THE MUSKOKA FIRES.

Mr. C. Duke, of Yorkville, has within the last few days received two letters from his son Charles, who is farming in the Muskoka district, in which are given accounts of the ravages committed out there by the bush fires. The young man writes from Utterson. In his first letter dated September 1st, he informes his father that their experiences of the previous day were "awful." The had at last to fly for their lives. The writer proceeds :—"The two houses are saved and all the live stock, but the barns and fences are all completely gone. We came to Titterson last night, and I am just going up to the farm. I dread to go. I know it will look awful. West's buildings are all gone; Turner's buildings, excepting the house, are all down; Fearon is completely cleared out—not an article left; Captain Openshaw is similarly visited; also Thoura. The English minister's house at Port Sidney, and W. Clark's houses are gone, but Mr. Crown's is saved. I don't know how it will end. Poor old Turner died on the roadside after he was carried out. We have have saved the fanning-mill, plough and cultivator."

The next letter is dated Tuesday night (last). Young Duke says :—"I cannot give you very good news yet. Rain threatened, but did not come; and yesterday and to-day the flames have been finishing Turner's fences, and the sawlogs are all blazing as I write. The wind is blowing hard. I saw Fearson yesterday; he looks bad; all his sheep were burned to death: everything was swept in the clearance that he lived in, but he saved his other barn and a hay-stack. Harvey had no fire near him." In a P. S. the writer adds by way of a crumb of comfort, "You need not be anxious, as I think we are all right now."

CANADIAN SHIPPING.

OTTAWA, Sept. 10.—The Department of Marine and Fisheries has just issued a list of vessels on the registry books of the Dominion of Canada on December 31st, 1881. From it it appears that the number of vessels remaining on the registry books of the Dominion on that date including old and new vessels, sailing vessels, steamers and barges, was 7,377, measuring 1,311,218 tons register, as compared with 1870. The number of steamers on the registry book on the same date was 918, with a gross tonnage of 190,159 tons, and a net tonnage of 120,141 tons. Assuming the average value to be $30 a ton, the value of the registered tonnage of Canada on the 31st December last would be $39,336,540, or £7,867,308.

The Sorrows of Genius.

Homer was a beggar.

Cervantes died in hunger.

Terrence, the dramatist, was a slave.

Dryden lived in poverty and distress.

Sir Walter Raleigh died on the scaffold.

Butler lived a life of penury and died poor.

Bacon lived a life of meanness and distress.

Plutus, the Roman comic poet, turned a mill.

Paul Borghese had fourteen trades and yet starved with all.

Tasso, the Italian poet, was often distressed for five shillings.

Steele, the humorist, lived a life of perfect warfare with bailiffs.

Otway, the English dramatist, died prematurely and through hunger.

Bentivoglio was refused admittance into a hospital he had himself erected.

The death of Collins was through neglect, first causing mental derangement.

Savage died in prison at Bristol, where he was confined for a debt of forty dollars.

Goldsmith's Vicar of Wakefield was sold for a trifle to save him from the grip of the law.

Chatterson, the child of genius and misfortune, destroyed himself at eighteen.

A VETERAN'S TALK ABOUT LUMBER.

A representative of this paper visited a veteran n the lumber trade Thursday for the purpose of applying the reportorial plaster and drawing from its burrow some information which might interest, amuse or instruct its readers, according as it might harmonize with their views or appear to them absurd. "Put yourself in his place" is what no one can do, and hence the views we get of things differ.

"So, young man," said the veteran, "you are in search of information about the lumber trade, in order to enlighten the public. Well, wisdom won't die with me, and you need not set me down on the start as the best informed man in the business. If you are looking for the Solomon of the trade, you might as well strike almost any other person. I can send you to such a man, or I can give you my opinion and what I know of lumbering. What points are you dazed on?"

"What effect will the high prices of supplies have on lumbering operations the coming winter?"

"Very little, in the way of limiting operations. The expense will be increased quite a good deal, of course. Pork will cost about $20 where it cost $16 last season; corn about 70 cents in place of 46, but hay and oats are not much higher. Stock will, perhaps, cost more and labor be higher. But the additional expense wont have much more effect on the amount of stock put in than the weather in winter has. If I wanted to help bull the market, I'd say, oh, yes; it'll be too costly bnsiness lumbering this winter, and a good many firms will go light. But I don't talk that way, beeause there is no sense in it. Men who haven't the capital may have to curtail their operations on account of the extra expense, but those who have the stock to cut, the capital to candle it, and confidence in the market, will go in just the same as though pork was but $10 a barrel."

"Then you think there'll be a large stock cut the coming winter?"

"Well, I don't think there will be an excessive crop. Some men will go in as though they thought there was never going to be another chance for them to make a harvest of pine, but there are not many such in the trade now. The firms lumbering in this Saginaw country are pretty much all composed of level-headed, well-balanced men, who can see a good way beyond the ends of their noses. They are in a position where they don't have to market their lumber, unless they choose. Of course, they'll cut enough to satisfy the demand, for the risk from fires is greater than ever, and much timber has to be cut to save it. But there is a powerful reason for conservatism in the cutting of timber in the Saginaw district."

"Do you mean that the stock is becoming small?"

"Yes, you have hit it. Some of the largest mills on the river haven't standing pine enough within reach to last them six years, at the rate they are cutting, and it is my opinion there are not a dozen firms on the river that can count on ten years' cutting, within profitable reach."

"Is there not timber they can get? Some land yet unexplored?"

"Not in the lower peninsula. There is hardly a pine tree standing south of the straits that has not been estimated. A good deal of land has been cut over the second time, and the virgin forest has been penetrated in every direction The railroad has done the business,"

"Then pine land is eagerly sought?"

"You can say so. No hungry grayling ever took a fly more eagerly than men snap at pine lands. A few years ago you couldn't give them away; now men are crasy to buy. And no wonder, when you consider the facts I've given you above. The prices which men are paying for standing pine, in my estimation, settles the fate of the market for some time to come. Prices cannot fall materially without ruining every man in the trade who has bought pine lately. There have been many sales where the stumpage cost three and a half to five dollars a thousand, and when you come to put cost of cutting, driving, booming, rafting and sawing on top of the stumpage, the margin at present prices for lumber isn't much, any one can see."

"What is about the average result on a lot of average Saginaw logs?"

"About fourteen dollars a thousand. You see, the virginity of the forests has been violated, and the best timber has been culled."

"But I see sales at $17 and $19 straight."

"Yes, but those are from selected logs and not the common run. In days gone by, when we took the first pick, logs would average 25 per cent. uppers, and often run as high as 40 per cent., but they won't average per cent. now, nor up to best common. Fourteen dollars is about the average result from an average lot of logs on this river now, sir."

"If as you say the pine is getting short in supply, wouldn't it be good policy to go slower in cutting?"

"Well, it might, and then again it might not. It would be, if it wasn't for the pesky fires that rage in the woods every season. Why, whether you believe it or not, it is true, that as much if not more timber has been distroyed in eastern Michigan by fire in the last ten years than has fallen by the axe. It's enough to make a lumberman who loves good timber shed tears to see the long stretches of dead pine which can be seen in a belt from five to nine miles wide extending from Sant Point to Thunder Bay river, while the marks of the devastating fires may be seen in every other locality where there are bodies of pine. Some of the owners of pine would gladly husband their resources, cut less lumber now and let price go up where they ought to be, but the chances are even that fire would destroy more than enough to make the difference in their returns, so that they would really make nothing by the operation. Some of the owners of pine lands are taking the risk and holding off, and as the end of the pine comes nearer there will be more conservatism in cutting and prices have got to go up. The prairies of the west are settling up so rapidly that Wisconsin and Minnesota are not going to have much lumber to spare for eastern consumption, and when the Michigan supply is exhausted, or nearly so, there will be a dearth of pine for the eastern market, unless some new region shall be discovered, and that dosen't seem possible. The lumber problem in this country is going to be a difficulty one to solve and you can't expect me to settle it."—*Lumberman's Gazette.*

Waste of Gas.

The cost of gas is a great expense in many a house. A bright light is a luxury, and is appreciated by every one, but it cannot be enjoyed without being paid for. Waste of gas makes the gas bills mount up, and the careful housekeeper may effect a considerable saving by preventing this. The gas meter should be turned off during the day, so that if there are any places where the pipes are defective, escape of gas may be prevented. The condition of the burners has almost as much to do with the amount of a gas bill as the cost of gas per thousand feet. Old wornout burners are the best friends which the gas companies have. A smell of gas should never be disregarded. It is a sign that there is an escape somewhere, and steps should be immediately taken to discover where it is, and put a stop to it. Last, but not least, gas when not in use should be turned out or left very low. A careless person who leaves the gas "full on," in an unused room, is throwing money away as much as if he cast it into the street.

Chinese Ingenuity.

A recent number of a paper published in China records a fresh illustration of the acuteness of the natives in the matter of exports from Hong Kong. Large quantities of matches are bought in this city for re-exporting to other ports, but on coming into the trader's hands they undergo strange transformation. Empty boxes are counterfeited and filled in the following manner:—After emptying the matches as originally packed (each box containing on an average sixty) they commence the refilling by laying two matches across each other, at the bottom of the box, in the form of an X, and fill up the box. The boxes, as now filled, do not contain more than two-thirds the original number of matches, and every gross thus sold realizes 50 per cent. profit.

IT NEVER FAILS.—Dr. Fowler's Extract of Wild Strawberry is an unfailing remedy for all kinds of bowel complaint.

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CLERKSHIP IN SHANTY for Winter. Practical knowledge of timber object more than salary. 4 years experience in offices, 2 in timber. Age nineteen. First class references. Address "CLERK," care of *Canada Lumberman*, Peterborough, Ontario. L22

A BARGAIN—GRIST AND SAW MILL FOR SALE, paying 12 per cent. clear; price 89,000; and above percentage guaranteed. Apply to

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☞ Every accommodation for Commercial and LUMBERMEN.
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Fraser's Hotel,
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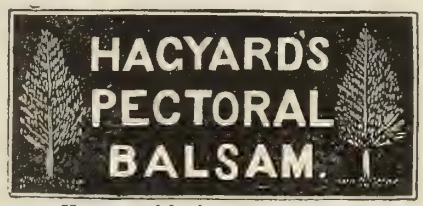

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Cherry, White Ash, Black Ash, and Dry White Pine Lumber.

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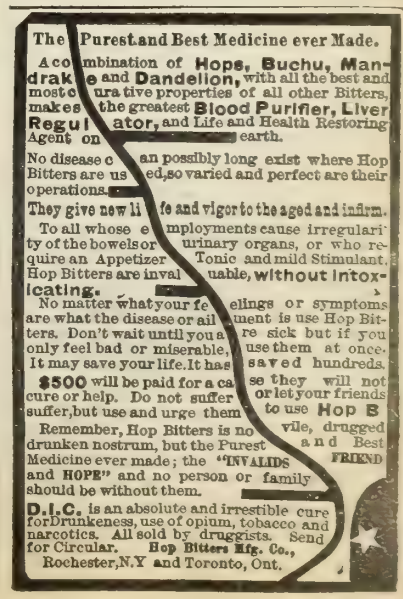

ITEMS OF INTEREST.

SOME arithmeticians have calculated that steam is now doing on the globe, every day, the work of 800,000 men; that is, all the machines and engines worked by steam have 80,000,000 horse-power. Of this the locomotive force represents 30,000,000 horse-power, as it is thought that there are 105,000 locomotives on both hemispheres, which run 220,000 miles.

THE lead used in sounding from a vessel usually weighs about 14 pounds, but in deep sea sounding a weight of not less than 150 pounds is frequently employed. Wire has been largely used for a line, as it makes less friction in sinking through the water. With hemp rope a sinker of 300 weight is sometimes twenty minutes in reaching the bottom in 1,500 fathoms of water, so great is the friction of the line.

A FRENCHMAN has devised a method of converting iron into steel, and at the same time producing illuminating gas. The iron is placed in a retort with charcoal or coke in layers, and is heated to 1650 degrees Farenheit. Fatty matters are then injected, and as soon as decomposition has taken place, a jet of dry steam is passed over the incandescent mass. The iron is thus changed into steel, while carburetted hydrogen is given off from the retort.

MR. MAXIM, inventor of one of the electric lights, ridicules the idea that there is danger to either life or property from the use of that light, and says that he is ready at any time to take the shock from any number of the largest machines. While lightning will jump through two miles of air and forty feet of solid rock, he asserts that no dynamo machine used for the electric light in this country will make a current of sufficient strength to jump through the one-hundredth part of an inch of either air or stone.

ONE of the great trials which the builder has to endure is the "saltpetering" of the brick-work, or the white streaks which too often disfigure the fronts of brick buildings. It is worth noting that this can usually be prevented by adding oil to the mortar at the rate of a gallon to the cask of lime. Linseed oil is generally used, but any kind will do which does not contain salt. If cement is used in the mortar, an extra gallon of oil must be used for each cask of lime. When the incrustations have once formed on a building, they cannot be permanently removed, though they can be for a time by washing with hot water or the muriatic acid generally used for washing down brickwork.

A WRITER in *Les Mondes* ascribes the exceptional healthiness of butchers to their inhaling the nutritive principles of meat, and a French physician of eminence deduces from this the desirability of vapor baths charged with vitalizing principles. Cooks, at this rate, ought to be amazingly full of vitality. The good health of butchers is probably due to the living entirely in the open air, the same cause which gives so many more years of life, on the average, to the grocer's clerk than to his dry goods brother. Thirty years ago butchers in London never wore hats at work, but drove all over the town bare-headed, as many young butchers do now. The inhaling idea is, like all others, old. A century ago consumptive patients were sent to live over cow houses.

ONE of the most gigantic schemes of its kind is that which proposes to direct the current of the St. Lawrence river, opposite Montreal, into the channel between St. Helen's Island and the southern shore—this to be accomplished by running a dam of large proportions from Point St. Charles, in the western part of the city, to St. Helen's Island. This dam would be 2,700 feet long and 900 feet road, and would give a head of twenty feet for mill elevators and factories. As contemplated, this project would cost some $7,000,000, and would realize the following advantages: The dam could be utilized either as a railway or carriage road, or both, thus obviating the necessity of a tunnel; and the harbor would be made a still water one, where vessels might winter.

CERTAIN insects are known which give something like an electric shock to anything touching them. The *Reduvius genatus*, or "wheel-bug" of the West Indies, is one so described by Kirby and Spence. Two other examples have been lately recorded in the "Proceedings" of the Entomological Society of London, by Mr. Yarrell. A letter from Lady de Grey, of Groby, referred to a shock caused by a beetle, one of the *Elateridæ*, or snapping beetle, and extended from the hand to the elbow. The other case is that of a large, hairy caterpillar in South America. Captain Blakeney on touching it had an electric shock so strong that he lost the use of his arm for a long time, and his life was even considered in danger. The last story is almost incredible, as a caterpillar, no matter how large, can hardly be supposed to supply as much electric energy as a gymnotus.

THE colossal crane or derrick—the most powerful in the world—which has been in process of construction for several years at the royal arsenal, Woolwich, Eng., is now an accomplished fact. The size of this apparatus may be judged from the curious details published, as for instance, that more than eighteen hundred tons of iron have been used in its manufacture, while the brass bearings alone amount to more than three tons. The design has been that this monster crane should be capable of lifting three or four 100-ton guns at once; the purpose, however, for which it has been mainly provided, is not to do work which other appliances could accomplish in detail, but, rather, to meet the probable necessity for dealing with pieces of ordnance so enormous as to defy all the means at present available for mounting them in their carriage. The motive power is steam, and, although calculated to raise twelve hundred tons in case of need, the apparatus is also fixed for raising small weights at accelerated speed, and thus adapted, in many instances, to facilitate the ordinary operations.

THE process of making screws is very interesting. The rough, large wire in big coils is, by drawing through a hole smaller than itself, made the size needed. Then it is put into sawdust and "rattled," and thus brightened. Then the head is shaped down smoothly to the proper size, and the nick put in at the same time. After "rattling" again in sawdust, the thread is cut by another machine, and after another "rattling" and thorough drying, the screws are assorted by hand (the fingers of those who do this move almost literally like lightning), grossed by weight and packed for shipping. That which renders it possible for machines to do all this is a little thing that looks like and opens and shuts like a goose's bill, which picks up a single screw at a time, carries it where needed, holds it till grasped by something else, and returns for another. This is about the most wonderful piece of automatic skill and usefulness to be seen, and it has done distinctive work at the rate of thirty-one screws a minute, although this rate is only experimental as yet; ninety-three gross per day, however, has been the regular work of the machine.

DR. JAMES EDMUNDS, of London, points out in the *English Mechanic* some of the advantages of double glazing in promoting the health of homes in winter. Skylights, he says, ought never to be put up unless double or double-glazed. Double-glazing answers perfectly if the sashes are grooved out for glass on each side, and are then glazed with an air space of one-half inch or more between the panes of glass. The glass must be put in with its inner faces perfectly bright and clean, and the glazing should be done on a cold, dry day, so as not to include watery vapor, which in cold weather will condense inside the air-space and cause mistiness. The double-glazing with an air-space makes a window almost as warm as a brick wall, and not only keeps up the temperature of a room in winter, and saves firing, but it keeps the room cool in hot weather, and it makes the temperature more uniform throughout the apartment. With ordinary thin glazing in winter the inmates are always being chilled on that side which looks toward the window, and baked on the side which is toward the fire, and no sooner do ladies leave the dining-room than the gentlemen instinctively make up to the fire-place and proceed to bake the cold side of their persons. Double-glazing our window sashes would save all this trouble.

DYSPEPSIA.—Strenthen your digestion—tone the stomach for utilizing and assimilating every atom of food you take; the body needs it for strength and vigor. *Zopesa* cleanses the entire system, stimulates the Liver, keeps you regular, and able to eat ten-penny nails. Letters and postal cards come in daily, telling of cures and help from *Zopesa*, from Brazil. *Positive proof* of the health and vigor it gives in a ten cent sample. Ask your druggist.

HOW TO FIGURE SPEED.—THE REASON WHY.

In selling machinery, the maker usually recommends that it be run at a certain rate of speed, which has been demonstrated by experience to be most favorable to its successful operation. To fix upon the relative size of pulleys to be used in communicating this motion from the "line shaft" is a calculation which seems to be very imperfectly understood by the average mechanic. Conversation on the subject with a large number of engineers, millwrights, and others, has led me to think there was a demand for more light, and accordingly I offer the following system, the convenience and accuracy of which I have proven by years of practical use. This simple example will illustrate:—

Given, a 20-inch pulley revolving 100 revolutions per minute, a belt from which will drive a 10-inch pulley how fast?

The "rule" laid down on the "books" says, "Multiply the diameter of the driving pulley by its revolutions per minute, and divide by the diameter of the driven pulley." I find no fault with this rule, but would suggest that the teacher and text book of the future will be successful in proportion as they abound in "reasons why," and give the student *principles* from which to form his own rules. As every *rule* must be based upon a *principle*, when one is familiar with the latter the former becomes self-evident and not easily forgotten.

The speed of a driven pulley will bear exactly the same relation to the speed of its driver as its diameter does to the diameter of the driver.

In the above instance, the driven pulley being smaller, let its size represent the denominator of a fraction, of which the diameter of the driving pulley shall stand as a numerator, thus:

$$\frac{20}{10} \text{ of } 100 = 200$$

Or, suppose the diameter of driver was 25 inches its speed 180, and a speed of 600 was required, what must be the diameter of driven pulley?

Reasoning: Since the speed must be greater, its diameter must, of course, be less than that of the driver. How much? As much less as its speed is greater, thus its size will be

$$\frac{180}{600} \text{ of } 25 = \frac{75}{10} \text{ or } 7\tfrac{1}{2} \text{ inches.}$$

This not only leaves less room for a misstatement of the problem, but in most cases the multiplications and divisions may be made mentally, thus saving time and avoiding liability to error.

These advantages are of still greater importance where intermediate pulleys or "counter" shafts are used to multiply motion. For instance, it is required to "set up" a planing machine, the cylinder of which must run 3,500; it has a pulley 4 inches; the counter shaft has pulleys 6 and 24 inches, respectively; the line shaft runs 160; what size driving pulley will be equired?

Reasoning: The 4-inch pulley being driven from one 24 inches, the larger pulley will revolve as much slower as 24 is greater than 4, and the drive pulley on line shaft must be as much larger than the driven or counter shaft, as its speed is slower than that of the counter shaft which it drives. The entire operation may be analyzed as follows:

For the sake of clearness, I will suppose that the motion was communicated *direct* from the line shaft to the 4-inch pulley, in which case the rive pulley must be

$$\frac{3500}{160} \text{ of } 4, \text{ or } 87\tfrac{1}{2} \text{ inches.}$$

The use of a counter shaft will decrease the size of driver exactly in proportion to the relative size of its pulleys. In the above instances the pulleys on counter shaft are 6 inches and 24 inches, consequently the driving pulley will only require to be 6-24 as large as when no counter shaft was used, and this being understood the whole problem may be disposed of as follows:

$$\frac{3500}{160} \times \frac{6}{24} \times 4 = \frac{175}{8} \text{ or } 21\tfrac{7}{8} \text{ inches.}$$

This method is even more useful where pulleys are not exact as to measurement and also in computing trains of gearing, etc., of which I shall have something to say at another time.

STERLING ELLIOTT.

THE DESTRUCTION OF WOOD IN CANADA.

A correspondent of the *Scotsman*, taking notes in Ontario and the outlying districts, writes:—"The Canadians have been so accustomed to a plethora of wood that they contemplate the waste of it with remarkable indifference. To the west of Lachute," he says, "additional fields were in course of being conquered, not from the primeval forest, but from a good second growth of larch and maple." The simple process appears to be to cut down the trees, burn the trunks and branches, and leave the stumps in the ground. At one time the export trade was very extensive here, but within the last twenty years there has sprung up in these lumber districts a class of men who assume independence of any extraneous help. In referring to a district traversed by rail, the writer says:—"As far as the eye could reach, the timber clothing of the country consisted of a second or third growth of aspen, birch and various kinds of fir. High over the rich expanse of foliage there rose gaunt skeletons of older trees, melancholy records of those bush fires which have robbed and are to-day robbing Canada of so much of her natural wealth." Originating in the thoughtlessness or carelessness of settlers, these conflagrations have been known to devastate thirty or forty square miles at a swoop. "In one day's journey," he says, "I saw six fires burning, which only seemed to a want fanning breeze to produce the same serious results."

Further on, in speaking of the snake fences, he writes:—"Their stability is secured without fastenings by the use of three or four times as much material as might have served the purpose, and on every patch of waste ground may be seen a litter of logs and branches in all stages of decay." Even at more than one of the sawmills he noticed the refuse timber shot into the adjoining rivers to be carried away at pleasure, and probably form with the admixture of mud, after sinking, a serious obstacle to navigation. In a concluding paragraph the writer states "that from the whole of the north-east region of Ontario there has for the past four years been a steady flow of emigration towards the north-west—as an instance, during last spring the Grand Trunk Railway moved some 4,000 persons."

A $25,000 Raft.

H. Pigeon & Sons, of Boston, mast and spar builders, started from below Starbuck's Island to-day for Boston via New York the largest raft ever shipped from this city to the Hub. The timber was cut in Ontario, Canada, north-east from Toronto. On the lake it was made into a raft and towed to Oswego, where it was separated into two rafts of six "cribs" or sections each, and one of seven cribs. John Wells, of Oswego, towed the rafts from that city to Troy. The propeller *Lafayette* left with them for New York. The united rafts were 900 feet long and 34 feet wide. At New York they will be increased by 113 pieces from Clearfield county, Pennsylvania. The raft thus formed will be 1,300 feet long and 64 feet wide. On the ocean the pieces will be united by six tons of cable chains, each piece being bound separately by the chains. The large tug boat *Charles Pearson* of Boston will tow the raft along the coast to Boston. The cost of towage from Canada to the destination will approximate $3,500. It has already amounted to $2,000. The raft will be worth $25,000 when it reaches the Hub. Large timber such as make up this gigantic raft were formerly shipped from this city to Boston by rail. The experiment of sending by the river and coast was tried last year by H. Pigeon & Sons, rafts containing 80 and 180 pieces being selected for the trial. The results were perfectly satisfactory, the great economy being in the matter of expense. The pieces in the raft which left to-day were from 75 to 95 feet long, and from 18 to 30 inches in diameter. They will be made into masts and spars of all sizes and descriptions, and will speed the voyages of all kinds of vessels from fishing schooners to the largest men-of-war.—*Troy Times.*

THE FOUNTAIN OF LIFE is the blood. Keep the fountain pure and all the tributaries of health are in good condition. Burdock Blood Bitters will cleanse the blood from all the impurities, expelling Scrofula and all humors, tones up the debilitated system, regulating the liver, bowels and kidneys, and brings health to the afflicted.

IMPROVEMENTS IN MACHINERY.

BY S. B. RICHARDS, IN THE "LUMBER WORLD."

When I was about sixteen years of age, my father got an idea into his head that I had the making of a first-rate millwright in me, and so took me in hand to develop my capabilities. How well he succeeded I shall not attempt to say, nor do I believe the reader would be interested in knowing. I have, so long as I can remember, had a liking, natural or acquired, I can't say which, for machinery and mechanical combinations, and, looking back to my boyhood, can recall many crude attempts to devise means to lighten, what I then believed were the arduous labors imposed upon me. My inventive faculties were not, however, equal to the task of decreasing the amount of physical exertion necessary to the accomplishment of my allotted tasks, although I experienced little difficulty in performing them in a manner essentially different from that usually accepted as the most sensible.

As I grew to manhood, I gave no little time and thought to devising new methods of performing mechanical operations, and shall never forget the time when my first application for a patent was allowed; nor my feelings, when I received, at our little country post office, the huge envelope, with the portentous words printed thereupon, "United States Patent Office; Official Business." That envelope stamped me as a man of note; the government had, after patient labor, and diligent research, conceded the fact that I had discovered and utilized something new; that this something new was worthy of governmental recognition, and that so valuable was it, I should have sole property right to, and in it, for the term of fourteen years, with a privilege of extension of this property right for seven years longer if I desired. Our little town had never been the home of an inventor, and I at once became an object of interest to every dweller therein. No one seemed to give the subject of *how* I should realize a fortune out of my invention, a thought, nor did I at first. I was an inventor; I had a patent, and what more could a man want? I was congratulated on every hand, and more than one expressed the hope that I would not think of removing from the village. I endeavored to wear my honors meekly, but it is not in human nature to resist being condescending to those who have looked upon you as being something inferior to them, when, by reason of the exertion of your own powers, you are enabled to overstep them in popularity, and I am afraid I more than once entertained the suspicion that I was superior to the majority of my companions.

After some months it occurred to me that it would be a good idea to sell my patent. I confess it appeared singular that capitalists and manufacturers in the large cities had not been around to see me in reference to buying me out, but attributing this to ignorance, upon their part, of the fact that such a patent had been granted, I started out to enlighten them. How well I remember the old mother, as with one hand in mine, and the other holding one corner of her apron, she bade me good-bye, with many injunctions as to care of my money and person, and cautious to "beware of them patent fellows." Dear old lady, she had full faith in her boy's smartness, if the "old man" was at times somewhat skeptical. I had never been very far or very long away from home before this, and the importance of the trip rendered it necessary that all the village should be aware of the date of my intended departure, so that I lacked not for hand-shakings and good wishes when I started out. That period of my life is particularly pleasant for me to remember. I had a patent; I was going to sell it; I should come home rich. Railroads in those days were not so numerous as now, and I had to go by stage some sixty miles to reach my destination, where I arrived late and tired in the evening. The next morning, after a long talk with the hotel-keeper, in which I told him I was an inventor and had a patent to sell, information which did not seem to impress him as I thought it should, I set out to find a firm that was engaged in the manufacture of such machinery as I had invented, and a brief sketch of my interview may possibly prove interesting.

Entering the office I was met by an old gentleman, with a red flannel shirt on, sleeves rolled above his elbows, hands covered with iron filings and oil, who inquired what I wanted. I said:

"You manufacture and sell wood-working machinery?"

"Oh, yes," he replied, "can we do anything for you? Our stock is quite complete, and our terms quite as liberal as other makers."

"I am not desiring to purchase, not being engaged in the wood-working line, at least to an extent that would justify me in the employment of machinery," I said, "but I have given a good deal of study to mechanical devices, and have a patent——"

"I am quite busy," interrupted he, "and am not very much interested in such matters anyhow, so you will excuse me if I say that we have all the inventive ability in our establishment that we at present can employ."

"But," I replied, "I am not looking for employment. I have a very good trade that keeps me busy——"

"Better stick to it," he broke in.

"Well," said I, "as you do not appear to care about looking into the matter, I will not take up your time. There is another establishment here engaged in the same line, and if you will tell me where they are located, I will not trouble you further."

"Well," said he, "you have a patent. What is it for?"

"A saw table," I replied.

"Have you a model with you?"

"Yes, and my patent."

"Well, I'll look at it, although such things don't interest me, and I have but little time to spare. Come in and sit down."

We went into an inner room, and I took out my model, which, by the way, had cost me many days of patient labor, and was very elaborately gotten up, and he examined it. "Let's see your patent," said he.

I handed it to him, and after a few minutes examination, he returned it with the remark, "I don't see as it would be to our advantage to take hold of it."

"Is there any objection to the use of the device?" I asked.

"None at all," said he, "if you can get any one to use it."

"Well, if there is no objection to the use of it, why wouldn't it be to your advantage to secure the right to build it?"

"How much do you consider the patent worth?" he asked.

"It ought to be worth about ten thousand dollars," I replied.

"The question," said he "is not what it *ought* to be worth, but what *is* it worth?"

"If I could dispose of it at once, I would be willing to take five thousand dollars for it," I answered.

"Good," said he, "now we are arriving at a basis for negotiations. Let me ask you how long a time it took you to conceive and develop this invention?"

I could not see what he was driving at, so replied that from childhood I had been noted for "tinkering" and trying to invent something, and that I believed I had a gift that way.

"Let me put the question to you another way," said he. "How long did you study upon this saw table before you conceived the idea of the combination you have made?"

"Oh, no time to speak of," said I, "it came to me all at once, as it were; that is, I conceived the idea that a saw table susceptible of the changes of position and relations to the saw, such as I have made, would be very convenient to the user, and of money value to me, so after a few days of thought upon the matter, I made a model and applied for a patent."

"Did it take you a month to do all this?" he asked.

"I think not so long as that," said I.

"What did your patent cost you?"

"Nearly fifty dollars."

"Just step out into the shop with me a few moments," said he.

We went out, and, going straight to the "buzz-saw," he picked up a piece of board, and, in a few moments' time, by the aid of some thin strps or thicker blocks, had cut that board up into pieces, the sawed edges of which presented various angles to the original flat surface. Calling a boy, he directed him to take the pieces into the engine-room and we returned to the office.

When we were seated he said, "I have taken you out into my shop only to show you that upon my old saw table I can perform the same operations that you can with your improved and patented arrangement. I can do everything you can, with as great accuracy, but possibly not quite so quickly. You come to me with your invention, that has taken but little of your time to devise, and necessitated but a slight outlay of money, and ask me to pay you the snug sum of five thousand dollars for your patent. If I could not, upon my old saw table, do what you can upon your improved one, and if it was essential that these operations be performed, the price you put upon your patent might be reasonable. If I buy your patent, I must have some prospect of getting my money, with a reasonable profit, back again. I fail, at present, to see how this can be done, and, of course, am not inclined to purchase at your price."

"What, in your opinion, is it worth?" I inquired.

"I should not care to put a value on it," he replied "but I will say this; if your invention were my own, I should not use it for the reason that it would only add to the expense of making an article, in which there is now very little profit, without in any manner adding to its real utility. You are a young man, endeavoring to make money without working for it, unconsciously perhaps, but nevertheless endeavoring to do so. Take my advice, go home, and to work. You say you have a good trade. Stick to your trade, and save your money. Invent all you please, so long as you don't neglect your business, but don't attempt to sell a patent until you *know* you have something that will facilitate operations, thereby cheapening the cost of performing them, or that will simplify the method of performing them, or that will permit of new operations being performed."

I went home, but it took me a long time to comprehend what the old man meant.

IRWIN & BOYD

Commission Lumber Dealers,

FORWARDERS,

Shipping & General Agents

PORT HOPE.

PORTLAND FOUNDRY.

JOSEPH McAFEE,

(LATE ANGUS McAFEE.)

Warehouse, Main St., St. John, N.B.

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Cooking, Ship, Parlor & Office Stoves

MILL CASTINGS,

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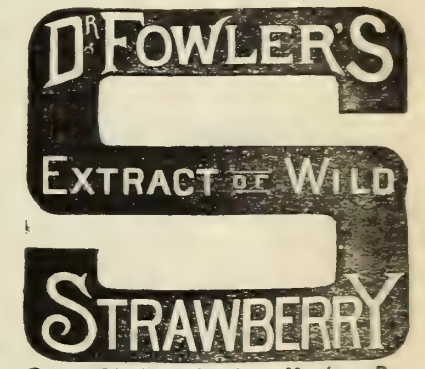

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FOR SALE BY ALL DRUGGISTS.

T. MILBURN & CO.,

Proprietors, Toronto.

We have added to our plant all the latest improved machinery for Electro and Stereotyping, and the manufacture of Printers Furniture, facilities for executing work which no other establishment in the Dominion possesses, and not excelled by any on the continent. A large assortment of various cuts constantly on hand.

FLEMING & SON,

26 Colborne St., Toronto.

Travelling Agent.

MR. A. L. W. BEGG has been appointed agent for the CANADA LUMBERMAN, and is authorized to collect subscriptions and grant receipts therefor and to make contracts for advertisements appearing in its columns.

The Canada Lumberman

DEVOTED TO THE LUMBER AND TIMBER INTERESTS OF THE DOMINION.

PUBLISHED SEMI-MONTHLY BY

TOKER & Co. PETERBOROUGH.

Terms of Subscription:

One copy, one year, in advance	$2 00
One copy, six months, in advance	1 00

Advertising Rates:

Per line, for one year	$0 90
Per line, for six months	50
Per line, for three months	30
Per line, for first insertion	10
Per line, for each subsequent insertion to 3 mo's.	05
Cards not occupying more than 12 lines (1 inch) per annum	8 00
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Advertisements intended for insertion in any particular issue should reach the office of publication at east three clear days before the day of publication, to insure insertion.

All communications, orders and remittances should be addressed and made payable to TOKER & Co., Peterborough, Ont.

Communications intended for insertion in the CANADA LUMBERMAN, must be accompanied by the name of the writer, not necessarily for publication, but as a guarantee of good faith. Communications to insure insertion (if accepted) in the following number, should be in the hands of the publishers a week before the date of the next issue.

PETERBOROUGH, Ont. SEPT. 15, 1881.

OUR TIMBER POLICY.

We are not aware that anything could prove more conclusively the short-sighted and destructive system with which the timber lands of the Province have been and are dealt with than the circumstances which are now about to compel the Ontario Government to place in the market a considerable area of pine lands in the Nipissing district. It is no longer a state secret that the Crown Lands Department of Ontario have recently organized parties to make reports on the timber in those townships in the district referred to that are now prejudiced and liable to be destroyed by the squatters and settlers and pine fire bugs, to which on several occasions we have found it necessary to refer. With wonderful acumen they seek to transfer the risk of this valuable trust to the lumber trade at par. Do they expect that the trade are equally ignorant of their business, and will bid such bonuses as they would have been justified in doing had the fire risks been protected by the department? It is within our knowledge, and our attention has been recently called to the immense depreciation that lumber operators put on the value of standing timber where the ground has been forestalled by the squatter or settler. Perhaps the statement of a practical operator, and one who is prepared at any time to bid for public timber lands, may call attention to this subject; the information is given freely to us to publish, backed up by evidence which may be available should we require to use it.

The circumstances are these, and seem to us what are liable to occur on this new area about to be exposed to sale. The operator states that he bought a limit not a hundred miles from the townships which are to be sold. He discovered that the settlers were damaging the timber, and although most unwillingly, he was compelled to operate. No sooner were his operations started than these settlers and squatters actually cut down and put three to four cross-cuts in from four to six hundred pine trees of the choicest kind. The only reason he could ascertain for this was that they would make sure of shingle timber when, or if ever, they should require them. The operator states that each tree would have averaged 140 feet of the best board timber. He further states that he appealed to the Crown Lands Department for protection with no results, and then asked the department to allow him an equal number of trees from the next township, which was not under licence, and was also refused; so that the operator lost this valuable timber, and the Province the Crown dues which would accrue therefrom.

We do not wish to be understood to claim that the department should not now expose these timber lands for sale; probably it is the only thing left to be done; but we do say that so long as the revenue of the Province did not require it, and the manufacturing requirements of the Province did not demand it, fresh timber areas were better unsold. There are quite enough timber lands under license west of the Ottawa section and south of Lake Nipissing exposed to dangerous fire risks, and which should be forced to furnish revenue by keeping other fresh territory out of the market, if it were possible.

A WORD TO THE TRADE.

We are now, notwithstanding the fair wind and flow of trade, approaching the period when the careful navigator will take in sail. We are going to ask a question, the answer to which ought to lead all thinking operators to operate carefully. Mr. Operator, had you the pine growing to-day that you have cut down within the last ten years still standing on hand, would you not be able to sell out for more money than you are worth to-day? We anticipate the affirmative reply.

The disposition to pay bonuses for timber lands based on the profits of stocks got out with cheap labor and supplies; the fact of a dear labor and supply market to face for the coming season of manufacture; the fact that for every percentage of advance in our labor there is an equal percentage less work done; the fact that the ebb tide of trade will face us with our stocks on hand, got out on these expensive, and perhaps to some extent unavoidable circumstances, this array of facts should arrest the natural and fatal anxiety of many in the trade to operate too largely and to endeavor to get rich too fast. To those that hold timber lands, we say, go slow. Keep your plant account in service; don't increase it. Keep your mill going—not too high pressure; your foundry bill will be less, and you will cut better lumber. Make up your mind to operate to the extent that you can handle under your personal supervision, and don't compete with your wealthier, but perhaps reckless neighbor for labor, and we safely predict that you will find your properties three years hence more valuable and under better control than those who, carried away by a little temporary prosperity, project increased operations, which can only be carried out under the most advantageous circumstances.

A DESPATCH dated Parry Sound, Sept. 2, says: Serious difficulties have arisen here between the river drivers in the employ of the Ontario Bank and the foreman of the Parry Sound Lumber Company about water rights on the Seguine river. Years ago the company purchased the right to overflood land, and constructed a large dam at the outlet of Mill Lake to hold a supply of water for their mill during dry seasons. The water is now very low, being barely enough to float logs through the sluice at Mill Lake. In order to keep a supply for the drive the Bank men have taken forcible possession of one sluice and have jammed logs on the rapids, holding back the water so as to shut down Mr. Wm. Beatty's flour-mill and the large saw-mill of the Parry Sound Lumber Company. The logs of the Bank, after leaving Mill Lake, must pass over the sluice at the company's mill before reaching the Bank's mill on the Georgian Bay. It is understood that orders have been given by the company's manager to resist this passage by force if necessary, and very serious complications, and even bloodshed, are feared.

THE very great scarcity of fodder next season consequent on the poor crops of hay is a matter of serious comment by the coming winter's operators in the woods. A double misfortune has befallen those of New Brunswick in the destruction of the great reserve fund, that of the Tantamar and new and west marshes being flooded by salt water. The dykes broke at the late high tide, completely submerging them to a depth of upwards of four feet.

PREVENTION OF FOREST FIRES.

The Kingston *Whig* has the following editorial:—

"The curse curseless shall not come;" and though like Mackbeth's wife we may hail the oft-seen terror as a "thing of custom," it will not the less work its mission as the penalty for the breach of foral or economic law. A race gifted with other aptitudes than that which has found its home in this country might work out the utilization of the forests which clothed it by converting them into materials which would add to their own wealth and so of mankind; but the discussion hereof would probably open up questions of ethiaology as various as those presented by the contemplation of many parts of the world endowed with everything but an intelligent population. There have been forest fires in Ontario since the settlement of the U.E Loyalists, increasing in destructive energy year by year, and it would seem vain to hope that they will not recur with greater ravage. The Ottawa valley has been desolated throughout entire townships until there are millions of acres which no man will buy. The consolation afforded by the agricultural commission report that such is not the case is brobably the best an ignorant and inculpable people can desire to have. While we can sell a few millions of feet every year, and while the party in power are satisfied with the returns, it is idle to discuss the propriety of enquiring whether this source of revenue is ever likely to fail us, or whether it is worth while to diminish the revenue by measures calculated to ensure its duration. With abundant fuel in the coal mines of a foreign neighbor we may cheer ourselves, while the miles of woodland yearly recede from view, that we have never made any effort to carbonize our wood into charcoal, but have instead dissipated its heat to the empty air. While our streams dry up, and the hum of many a mill is hushed forever imported coal will supply our frontier manufactories with power we have flung back to the heaven that gave it.

It could not be otherwise where national opinion is impervious to any conception of the curse which is wrought on us by the destruction of fertile soil, of fuel, and of building timber every year, it could hardly be expected that criminal negligence in dealing with fire would be punished. The record of the general iniquity in this respect might be shown in darker light. The hideous crime of arson is common in Ontario, and, as might also be expected, no steps are being taken in the the interests of justice to bring the criminals to account. No insurance company will keep a policy on foot upon unoccupied farm buildings, and the record of their business shew the wisdom of this provision. It is well known also that bad harvests immnsely increase the losses of insurance companies. Much may be allowed for the difficulty of detecting incendiarism, but the difficulty is too often made an excuse for supineness. From the combustible material of farm buildings a law exacting people would derive a reason for greater activity in ferreting out incendiaries. The very ground for such a reason makes them dread injury to themselves from the hands of the wrong doer should their endeavour to track him prove abortive. And so it is with field fires put out among stumps and in log-heaps during the season between May and November. If the farmer is negligent his neighbors suffer and they put up with it. If one per cent of the actionable cases had been dealt with ten years ago it is more than likely the damage would be enormously less. Those who, from a sense of public duty, will bring the offender of this year before the courts, will merit the thanks of the public. Not a single case of negligence should go unpunished. It is one means only, but an important means, of educating criminally careless people to a sense of their duty, and of the rights of others. And such a conviction will spread into the domain of those cases attributed to accident. When the farmer shall be made keenly sensible of their rights and duties in this matter, there will be a ray of hope available to the public that the Government of the Province will do something to protect the Crown Timber Lands from destruction by fire.

TRY BURDOCK BLOOD BITTERS, the great system renovator, blood and liver syrup, acts on the bowels, liver and kidneys, and is a superb tonic.

TORONTO.

From Our Own Correspondent.

Since my letter to you of two weeks ago lumber has been arriving for export by the N. & N. W. R. quite freely, and the docks belonging to that company are crowded with lumber, recalling to mind the good lumber times which existed at the close of the American civil war. The local dealers, however, are still complaining bitterly at the treatment accorded them by the railway company in the matter of supplying them with cars for the local wants of consumers; dimension stuff in consequence is extremely scarce, and the company persistently refuse to grant them more that a limited number of cars for the wants of the city trade. This discrimination in favor of the foreign markets, as against the wants of our home market, is certainly unjust, when we consider the large amount of pecuniary aid given by our citizens to assist railroad enterprise. This, however, is not the only instance of unfair treatment received by Torontonians at the hands of railway corporations, and so it will continue to the end of the chapter. Railway companies are proverbially slippery customers to deal with, and you never know when you have them; there always seems to be some loop-hole through which to escape from the performance of their engagements.

Another serious cause for complaint, as mentioned in my last letter, is the large increase in their freight tariff, 20 per cent. being the rate of advance from all points of the N. & N. W. R. and its various branches. True, the company try to convince their customers that they are actually granting them concessions, instead of laying on more onerous burdens, inasmuch as they grant them the privilege of loading on a car 20,400 lbs. instead of 20,000 lbs., the latter being the weight previously allowed to shippers. At a first glance this appears plausible, but the company know full well that previously, in at least eight cases out of ten, the latter weight was brought over the road, but want of time and other causes prevented the weighing of all cars to detecting offenders. Their specious pleading in this case virtually amounts to this: We will grant you the liberty to do that which you have hitherto done, and charge you 20 per cent. additional for the privilege of so doing. This increase in rates will tell most severely on dimension stuff cut to order, as shippers cannot venture safely in putting on more than 7,500 feet and keep within the weight at present allowed. This estimate, of course, is based on the lumber being green from the saw, therefore the only course open to them will be an increase in prices on all bill stuff cut to order; and lath, unless dry, had better be left at the mills until they are seasoned, as cost of manufacture cannot be realized if brought here in a green state.

Another discrimination in favor of the foreign trade, as against the local dealers, is to be found in the difference of about 25 per cent. in freight rates in favor of all lumber passing over the company's docks; so that all things considered, it is little wonder that yard men and local consumers deal out hard names when discussing this matter, and the fact is undeniable that retailers are so heavily handicapped through the above and other causes, that it is little wonder that so many go to the wall when times of financial depression occur. At present, however, in spite of all difficulties, building goes on as briskly as ever, and it would seem that Toronto had obtained possession of Alladin's wonderful lamp, for turn whichever way you will, new buildings are springing up in all directions, and vacant lots in eligible positions will soon become a thing of the past.

Prices at the various yards remain firm, and former quotations are fully maintained, and should the present dry weather continue much longer, bill stuff will be hard to obtain at any price, as a large number of mills have been compelled to shut down, not daring to continue running until rain has fallen, as the sparks from their smokestacks easily ignite the combustible material laying all around them. Rates to Oswego rule about the same as mentioned formerly, and vessels hard to obtain.

Toronto, Sept. 9, 1881.

Improvements are constantly being made in the manufacture of steel pens. Esterbrook's are of superior excellence. For sale by all stationers.

EXTENSIVE FIRE.

AMHERSTBURG, Sept. 8.—For the past few days fires have been burning along the line of the Canada Southern Railway in this county, but not till this week was any serious damage done. Watchmen have been employed day and night at places where buildings and other property were in danger. In the neighbourhood of McGregor D. Sicklesteen has had men watching the fires for several days. On Wednesday night, notwithstanding these precautions, Mr. Sicklesteen's mill was totally destroyed, and Thos. Oullette's large stock of hardwood lumber at McGregor was burned and badly damaged. About eleven o'clock on that night fire was discovered in the south side of the mill, and in thirty minutes the entire building was ablaze. Messrs. Oullette's and Sicklesteen's horses were immediately got out and set to work drawing water to the fire, and lumber and logs from it. The men had one force pump and hose, which they worked to great advantage while the water in the well lasted. Everyone who could get a pail was at work, and men never worked more faithfully. Robert Pool and Theophilus Lemay overworked themselves and had to be carried away. Peter Laporte had his feet badly burned, but no one else was injured except by overwork. Telegrams were sent to Messrs. Oullette and Sicklesteen, at Amherstburg, as soon as possible, and they at once drove out. When the fire brok out the watchmen were busily engaged on the north side of the mill, where the fire has been raging in Hiram Walker & Sons' woods, which caught fire from a Canada Southern engine about a week ago. At one time it was thought that the whole village would be burned. Mr. Sicklesteen's loss on the mill is $6,000; insurance, $2,500. Mr. Oullette's loss on the lumber, &c., is $8,000; insurance, $5,000, of which $2,000 is in the Royal, and $3,000 in the Mercantile. Mr. Sicklesteen's mill was only completed last year, and was the best and most complete in the county of Essex. Its destruction will be a great loss, not only to Mr. Sicklesteen, but to the village of McGregor and neighbourhood, as a large number of men depended on employment therein and about for their livelihood. Between McGregor and Essex Centre the bush is full of fire, and in many places the fences along the track are burned. In the neighbourhood of Cottam considerable damage has been done to fences, &c. Word was received here yesterday afternoon that a saw mill at Gesto had been burned, but it is hoped the report is incorrect.

The Montreal *Gazette* says that the great display of Colonial timbers, which was so important a feature of the London International Exhibition of 1862, and in which Canada was not badly represented, was, at the close of the exhibition, transferred to the museum at Kew. The museum was begun in 1847, the first contributions being a few objects from Sir William Hooker's private collection. The botanical collections at Kew were commenced about the middle of last century by the Princess Dowager of Wales, mother of George the Third. The King, her son, greatly increased them, with the scientific aid of Sir Joseph Banks. The impulse given to navigation and exploration towards the close of the century had the effect of adding a great deal to its botanical treasures, the New Holland house having been specially built for Australian plants. During the two preceeding reigns Kew was comparatively neglected, but on the Queen's accession an enquiry was made into its condition, and the result was that the royal gardens were devoted to the public service. Relations are maintained between Kew and all the great botanic gardens of the British Empire.

THE WORST GENERAL in the battle field of life is general debility, which the vital forces often fail to conquor. Burdock Blood Bitters are ever victorious against all attacks of chronic disease, they regulate the bowels, act upon the kidneys, liver, and all the secretions, tone up the debilitated system, strengthen the nerves, purify the blood and restore lost vitality One dollar per bottle. All dealers in medicine can supply you.—T. MILBURN & Co., Toronto, General Agents.

Worthless Stuff.

Not so fast my friend; if you could see the strong, healthy, blooming men, women and children that have been raised from beds of sickness, suffering and almost death by the use of Hop Bitters, you would say "Glorious and invaluable remedy."—*Philadelphia T...*

THE MART
BY F. W. COATE & CO.

SALE OF VALUABLE

Timber Limits

Near Lake Nipissing.

The subscribers have received instructions to sell by Public Auction, WITHOUT RESERVE, at the Mart, 57 King St. East, in the City of Toronto, on

Wednesday, 5th Oct. Next

The Valuable Timber Limits situated near Lake Nipissing, and designated as Berths Nos. 29, 30 and 38 containing 36 square miles each.

The outlet from these limits is by the Bueve River, which runs centrally through a large section of them, affording first-rate facilities for running timber or logs into Lake Nipissing.

By recent survey of two lines and ranging a portion of them, they are known to contain a large quantity of excellent White and Red Pine, represented to be quite equal, if not superior, in quantity and quality to any in the entire district; a considerable portion of it being in close proximity to the river, growing on good even surface and can be easily worked.

The Limits have not been worked, and will be sold to purchasers in separate lots as they are designated and on liberal terms, which will be stated at time of sale. Sale to commence at 12 o'clock.

F. W. COATE & Co.,
2L22 Auctioneers

E. S. VINDIN,
Commission, Shipping, Forwarding and General Agent.
LUMBER MERCHANT
Office, Tempest's Block, Port Hope. L11

D. S. BRIGGS,
9 TORONTO STREET, TORONTO.
WHOLESALE DEALER IN
Clear, Pickings, Common and Hardwood Lumber, Lath, Shingles, &c.
BILL STUFF CUT TO ORDER.
L12-1y

S. S. MUTTON & Co.,
Wholesale Lumber Dealers
TORONTO.
We have for Sale a large quantity of PINE, OAK, WHITEWOOD, ASH, CHESTNUT, CHERRY, BUTTERNUT, BASSWOOD, &c.
☞P.S.—A SET OF TUB MACHINERY FOR SALE, CHEAP—OR EXCHANGE FOR LUMBER. 1yL16

A. L. UNDERWOOD
WHOLESALE DEALER IN
White Pine, Basswood & Hardwood,
82 King Street East,
TORONTO, ONT.
1yL16

SAMUEL WINDRIM,
MANUFACTURER OF
Agricultural Implements, Etc
MILLBROOK, ONTARIO.
HAVING DISPENSED WITH THE SERVICES OF AGENTS, I take this opportunity to bring to the notice of intending purchasers of Reaping Machines, that I have now on hand a quantity of the Celebrated
HANLAN REAPER,
which has NEVER BEEN BEATEN YET, and am prepared to allow the Agents commission—FIFTEEN PER CENT—on all purchases. L17tf

Penetanguishene Foundry
AND
MACHINE SHOP
CRAIG & CAMERON, Proprietors.
The undersigned beg to announce to the public that they are prepared to make all kinds of **Mill and Steamboat Brass and Iron Castings.**
All kinds of PLOW CASTINGS kept on hand. Plow Points and Landsides a specialty.
We have first-class machinery and are prepared to do all kinds of TURNING or PLANING on short notice.
We hope by strict attention to business and moderate charges, to merit a share of the public patronage.
☞All work guaranteed.
G. A. CRAIG.
1yL17 C. CAMERON.

The Best Axes in the World!

Single, Double and Triple Steel, 28 Patterns.

Warranted Good or Exchanged.

And Burrell's, Warnock's, and Dundas Axes, made specially for the Lumber Trade, repacked any weights without extra charge. Lindsay Pattern of Broad and Blocking Axes. LANCE TOOTH SAWS, warranted good. P. Jewill & Sons (Hartford, Conn.) LEATHER BELTING. CUT FILES. LATH YARN. Mill and Shanty Hardware. No. 1 LARD OIL. Heavy HAMES, BUCKLES and HARNESS TRIMMINGS. Ballard and other RIFLES, from $10 each. Large assortment of CARTRIDGES.

GEORGE STETHEM, Peterborough, Ont.

Importer, Jobber and Retail Dealer in Hardware. 12L17

Wrought Iron Shanty Cook Stoves

The Best Article ever offered to the Trade.

I have much pleasure in drawing attention to my **WROUGHT IRON COOKING STOVE, for Shanty, Hotel and Boarding House use.** These Stoves are made of **Heavy Sheet Iron,** the top and lining of the fire-box being of **Heauy Cast Metal** and all the connecting parts of substantial **Wrought Iron Work.** The dimensions of these Stoves are as follows:—

SINGLE OVEN STOVE

Top surface contains six 10-inch holes, with ample room between, and one oven 16 x 24 x 26.

DOUBLE OVEN STOVE

The Double Oven has a top surface containing twelve 10-inch pot holes, with two ovens, each 16 x 24 x 26. One fire-box of suitable size for area to be heated. Below will be found Testimonials from some of the leading Lumbermen, who have used my Wrought Iron Cook Stoves since I ommenced manufacturing them. They are the names of gentlemen who are well known and eliable, and will carry more weight than any recommendation of my own could do.

The Best Stove I have ever Used.

PETERBOROUGH, May 31, 1880.

ADAM HALL, Esq., Peterborough. Dear Sir,—I have used your Wrought Iron Cooking Stove in our lumbering operations since its introduction here, and have no hesitation in saying that I prefer it to any other. For durability, economy and efficiency, where a large number of men are employed, it is the best stove I have ever used. You can, with confidence, offer it to hotels, boarding houses and lumbermen.

Yours truly, THOS. GEO. HAZLITT.

The Stove for Lumbermen.

PETERBOROUGH, June 1st, 1880.

ADAM HALL, Esq., Peterborough. My Dear Sir,—We have used your Wrought Iron Cooking Stove and find it is very satisfactory for lumber operations, especially so on drives. We can recommend it highly.

Yours truly, IRWIN & BOYD,

Gives the Greatest Satisfaction.

PETERBOROUGH, June 3rd, 1880.

A. HALL, Peterborough. Dear Sir,—I have had the Wrought Iron Cook Stove, purchased from you, in constant use ever since last fall, and it gives the greatest satisfaction in every respect. I can recommend them highly to any one who is in the lumber business. Very truly yours, GEO. HILLIARD, M.P.

EVERY STOVE GUARANTEED

All the necessary TINWARE and CUTLERY for Shanties suppied at the Lowest Prices.

ADAM HALL, Peterborough.

THOSE FOREST FIRES.

GREAT DESTRUCTION OF VALUABLE TIMBER, ETC., IN THIS DISTRICT.

MINDEN.—Forest fires have been raging in this neighborhood for the last week, but have not done much damage until within the last two or three days. Hazlett's, Hilliard's and Ullyot, Saddler & Co.'s timber limits are said to have been damaged to a large extent in the township of Stanhope. The crops and fences in some instances have been totally destroyed.

MILLBROOK.—Bush fires have been raging in this vicinity for the past week, destroying barns, grain and fences. A heavy thunderstorm, lasting about six hours, visited here last night, which has greatly stopped the bush fires, though the village is still filled with smoke.

COBOCONK.—The excessive heat of the last few days, together with the long spell of dry weather, has made this entire country one vast tinder-box. Some years ago the whole country to the north and west of this point was swept by fire, killing nearly all the vegetation, since which time the progress of decay in the falling timber has been going on. Now a few small green shrubs with tall, dead trees, and dead decaying down timber cover the face of the ground for some miles. At many places the fire has got a start, and with the gale of wind we had yesterday, its progress was rapid. The smoke was so dense here as to render it almost unbearable. An object could not be discerned one hundred yards away, and falling leaves flew around in every direction, giving the air the appearance of flocks of birds passing steadily in one direction. The inhabitants walked around with handkerchiefs to their eyes, one and all having the appearance of an old toper after a week's holiday. The wind kept up at a high rate until late on Wednesday. Yesterday morning, however, it was almost a dead calm. Had it continued as fiercely as the day before there would have been great danger from a fire approaching from the north-west, and distant not more than three miles, with abundance of fodder to supply it. South from this point two farmers have lost all their fences and buildings, and several more their fences, while to the north numerous fences are burning in every direction. At the north siding where there is a large quantity of cord-wood piled the fire has raged for several days, as also at numerous other points along the line, but has been checked by the employees. The night before last the village of Kirkfield had a narrow escape from being totally consumed. As it was a house and a large quantity of slabs belonging to the Mackenzie Bros. was consumed, and only for the extraordinary exertions put forward by the inhabitants, their large mills would have taken fire. Had such been the case, nothing could have saved the village.

The great want is rain, and unless it comes before long, or the wind keeps a dead calm, the whole country will be in flames.

Another despatch says:—McBain's saw-mill about six miles from here, is burnt. The smoke to-night is very dense. No rain has fallen here for five weeks.

PARRY SOUND.—For the past two weeks, in every direction, we have seen the glare of fire made by the conflagrations. The settlers have been working night and day to save their little all, and still the progress of the devouring element is not stayed. The efforts of those who have been fighting the flames have met with considerable success, and a large number of houses and barns have been saved, but thousands of dollars worth of valuable pine has been burnt. Nearly every farmer has lost more or less by the burning of fences, the fire running over his meadows, or burning some portion of his crop. In the immediate vicinity of the village the fire has been raging with great violence. On Wednesday Parry Harbor was threatened with destruction, and it required a determined fight to prevent the fire creeping up over the hill and catching in the Ontario Bank mill yard. The wind favored the efforts of the workmen in fighting the flames. On Tuesday and Wednesday the residences of Messrs. L. McGowan, S. J. Peake and W. A. Scott were in great danger, but were eventually saved. Yesterday the whole country was enshrouded in a dense smoke, and it is feared that if rain does not soon come the destruction of property will be very much greater. On Wednesday a fire broke out in the woods near Mr. William Beatty's residence, caused by a fire started by some small boys who had a shanty built there. A large number of men were engaged all night in putting it out, and it is now nearly under control.

OVERHEAD HEATING.

The system of overhead heating in manufactories and mills by means of steam pipes is being very generally adopted in New England, and is recommended by the insurance companies. The first objection usually made is that heat rises, but in point of fact the connection of heat from pipes is by radiation, and does not follow special direction either upward or downward under the usual conditions of a factory. It is simply a question of diffusion, and the best place for the pipe is where the radiation or diffusion is effected in the best manner. One of the greatest dangers to which factory buildings are exposed, and one of the heaviest causes of loss, is the collection of combustible matter on steam pipes, where they are ordinarily placed at the sides of the rooms under the windows. Mr. Edward Atkinson, president of the Boston Manufacturers' Mutual Fire Insurance Company, recently addressed a circular to the managers of fifty-two mills where this system is employed asking a number of questions, to draw from them the results of their experience with the overhead pipes, and received forty-two answers. Out of the forty-two replies two were unfavorable; two were unfavorable, but were qualified by statements that showed their apparatus to be poor; one was favorable with exceptions, and thirty-seven were absolutely favorable. In respect to economy in heating the answers varied from nothing to twenty-five per cent. saved, and the greatest saving was shown where the pipes were away from the wood and brickwork, and therefore lost nothing by having the heat conducted away. Among the mills which sent favorable answers are many of the largest in the country, and that they do not speak until they have thoroughly tested the system. The coils of pipe are generally placed about two feet from the ceiling on hanging brackets from the beams, and one and one-fourth inch pipe is the best adapted for the purpose. In addition to the safety from fire, there is the economy of space, and every inch of floor space is available. The system is one that should commend itself to those who are engaged in the manufacture of inflammable articles.

New Forests.

A writer in a West Virginia paper says that the Shenandoah valley, when first settled, 160 years ago, was an open, prairie-like region, covered with tall grass, on which herds of deer, buffalo and elk fed, and devoid of timber except on occasional ridges; but that after it became settled trees sprang up almost as thickly and regularly as if seed had been planted. These forests, having been preserved by the farmers, cover now a large part of the surface of the valley with hardwood trees of superior excellence. The explanation of this change is that previous to the settlement of the valley annual fires, negligently started by the Indians, burned up the young trees and prevented the formation of forests, but with the arrival of settlers these fires were prevented; and the opinion is asserted that the treeless character of the western prairie is owing to the Indian practice of annually burning the grass. Were it not for that, dense forests would have covered these vast plains for centuries.

How to Give Pine an Oak Color.

Wash the wood carefully in a solution of copperas dissolved in strong lye in proportion of a pound of copperas to a gallon of lye. When the wood is dry, after having been thoroughly saturated with this wash, oil it, when it can be stained and again oiled. Often, when not subjected to hard usage, the color will remain undimmed for several years, only requiring to be oiled occasionally. The color may be put on with a short brush, or the hands being protected with thick buckskin gloves, the wash may be applied with a cloth, which will saturate the wood more evenly. It will blister the hands if they are not well protected.

KOUMISS.

The Tartars and some other equestrian tribes, from time immemorial it is said, have practiced the art of brewing a sort of beer from mare's milk; and in later times they have learned how to distill this beer and procure from it a very potent brandy. Koumiss is the native name of the mare's milk beer, and rack or racky of the koumiss brandy. This koumiss has at times become celebrated among enlightened people as a health reviver—a fact, by the way, not at all extraordinary, and not necessarily dependent upon any good quality of the koumiss. The regular doctors and the standard medicines fail us so often that we must not be too severe on the afflicted, who, in their despair, resort to quacks and the outlandish devices of the barbarians.

The following account of the preparation of koumiss by the Tartars is on the authority of a memoir by Dr. Grieve, in 1788, to the Royal Society of Edinburgh. Take any quantity of mare's milk, dilute it with a sixth of water, pour it into a wooden vessel, and add as a ferment about one-eighth of very sour milk, or better, of old koumiss; cover the vessel with a thick cloth and keep it at a moderate temperature. After standing twenty-four hours, a thick coagulum rises to the top, which must be well mixed in by beating and churning. After reposing for another day, it is again stirred till it becomes quite homogeneous, and in this state it forms the new koumiss, which has an agreeable sweetish acescent taste. Koumiss keeps well, and, like other beers and wines, with proper care, improves with age in taste and becomes more alcoholic.

It is often preserved and transported in bottles made from horse skin; a complete bottle is made from the skin of the hind quarter, the leg part forming the neck of the bottle. We understand that it is the practice of some of the tribes to prepare koumiss in the skin bottles by simply filling up the bottle with fresh milk as fast as the koumiss is consumed. If the rate of using and filling up be properly regulated, a pretty uniform product would be secured, but of course it would be a sort of "'alf and 'alf."

It is to be understood that mare's milk is the basis of the genuine koumiss, and no doubt genuine koumiss has a taste and odor peculiar to and characteristic of mare's milk. But as to chemical constitution, there is very little difference between mare's milk and that of other large mammals, and any kind of milk will produce koumiss closely resembling the genuine; perhaps cow's milk will produce a koumiss which will surpass the genuine. The Tartars use mare's milk because of the abundance of horses in comparison with other milk-giving animals. Horses and Tartars have been constant companions for ages, and thus it has come about that Tartars became experts in the difficult art of milking mares and then invented koumiss. The ancient Scotch made a fermented drink out of milk, but not mare's milk, which is proper to allude to here. The basis of the Scotch drink was whey, which was prepared by keeping it in the ground, undisturbed, for at least a year.

A drink under the name of koumiss has been on sale in some of the saloons of this city, which is prepared from a receipt substantially as follows: To one quart of milk add one tablespoonful of sugar and the same of brewer's yeast; when sufficiently fermented, preserve in strong bottles.

Wine whey, and innumerable punches, and Tom-and-Jerries, which contain milk as an essential ingredient, also are related to koumiss. And there are those, constantly increasing in number, who do not allow that milk can be improved for any useful purpose by the addition of alcohol.

A few days since the news was flashed over the country that koumiss had been recommended in President Garfield's case, and that a supply of it had been forwarded for his use. Koumiss has accordingly become a subject of extensive inquiry, and thus has originated the present article.—*Scientific American.*

THEY ALL DO IT.—Everybody uses "TRABERRY" for the teeth and breath, the newest, brightest, cosiest little toilet gem extant. Try a 5 cent sample.

DR. FOWLER'S EXTRACT OF WILD STRAWBERRY cures canker of the stomach and bowels, dysentry, cholera-morbus, and all summer complaints.

THE ELECTRIC LIGHT IN SAW MILLS.

The lighting of saw mills with the electric light is now being tried in various parts of the country, under different conditions, and its utility and economy will be fully tested. That the light in itself is adapted to the purpose there can be no doubt, and when it shall be fairly demonstrated that the machinery for its production can be run by the mill machinery and produce a steady light at less cost than is involved in the use of other means of lighting, or that the reduction in the fire risk or the amount of additional work accomplished shalll be sufficient to offset any increase in the expense, the electric light will eventually come into general use. The light is used in the McGaw mill, in this city, and in some of the larger mills in the west and Canada, with fairly satisfactory results.

The experiment of running the generator by the mill machinery is being tried at Alpena, in the bay shore mill of Fletcher, Pack & Co., which was lighted for the first time on the 13th instant. The light is furnished by a Maxim generator, run by the mill machinery. The mill is one of the best saw mills in the State, and contains the latest improvements—steam feed for the circular saws, cant turners, live rollers, patent edgers and every modern appliance. The upper storey of the mill has three electric lights, which, it is said by the local papers, illuminate the large room almost equal to the light of day. Each lamp has an illuminating power equal to that of two hundred candles. The *Argus* says: "There is a slight flicker to the lights, which is caused by the mill machinery running a little faster at some times than at others. When the saws are cutting logs there is a slight check on the motion of the engine, and the machinery works somewhat slower than when the saws are not cutting. As the same power that drives the mill machinery also drives the electrical machine—the result is that the electric machine is run at different velocities, and thus occasions a slight flicker of the light." The running of the electric generator by water power is also to be tried at Alpena. The *Argus* says: "Negotiations are being made for lighting up the mills, opera house, business places, streets and dwelling houses by the electric light. The motive power will be at the dam, and wires will lead from there to various parts of the city. The cost of putting in such works will not be very expensive, and the light can be furnished cheaper than gas. It is a better, clearer and stronger light than gas, and there is no danger from fire. The lamps with which it is proposed to supply private houses are of thirty candle power, and are said to be almost indestructible—the danger of breaking by fair usage being but little. The dam promises to be of much benefit to the city. It runs a saw mill, furnishes large booming facilities for logs, supplies the power that furnishes the city with water, and now it is proposed to make it furnish light for the mill, streets, stores and houses." At the McGraw mill in this city some difficulty is experienced in keeping the lamps in order. When the lamps are in order the light is satisfactory.—*Lumberman's Gazette.*

The Strength of Small Spruce Beams.

F. E. Kidder performed a series of experiments at the Massachusetts Institute of Technology, their object being the determination of the moduli of elasticity and of rupture in small beams of white spruce *(Abies alba)*, and such other information as might be derived from the data obtained, The results of these researches are embodied in a paper read before the American Academy of Arts and Sciences, and printed in the current number of the *Journal of the Franklin Institute.* The conclusions drawn from the results of the experiments are as follows:—The modulus of elasticity depends not only upon the elasticity of the material, but also upon the length of time that the load is applied. When subjected to loads not exceeding one-sixth of the breaking weight, spruce beams do not take a permanent set; but even under very small loads, if applied for any length of time, there will be a temporary set. Knots and gnarls in beams loaded at the center, when not within one-eighth of the span of the centre of the beam, do not materially affect the elasticity under small loads.

NEW GLASGOW.

MESSRS. I. MATHESON & CO'S FOUNDRY AND BOILER WORKS.—In the fall of 1867 Mr. Matheson started a foundry and boiler works in this place, and, owing to his extensive advertising in the daily papers, has become one of the best known manufacturers in the Province. His enterprise, after many years of struggle, was well established, and he was just beginning to realize the return of prosperity when, with a number of heavy orders on his hands, and a workshop full of partially built boilers and engines, a disastrous fire destroyed his principal workshops and machinery. The loss was a heavy one to Mr. Matheson, who, unfortunately, had no insurance. But nothing discouraged, Mr. Matheson set to work to rebuild, and although less than three months has elapsed since the fire, a new building three times as large as the one destroyed by fire has been erected, and operations have recommenced with renewed vigor and energy. The new building, 175×140, is roofed with galvanized iron, and contains the machine, boiler and smith shops. Adjoining is the brick moulding shop, 135×36, and several other buildings. A siding from the Eastern Extension and Intercolonial railways runs through the main building. Forty mechanics are steadily employed, to whom as good wages are paid as are to be obtained in any part of Canada. These and other orders will keep the works running on full time for the next four months. Messrs. Matheson's specialty is the manufacture of boilers, bridges, steam-hammers, windlasses, and all kinds of iron ship works, shears, and hydraulic presses' for knee-bending. They also import saws, belting and pipe. Five of their boilers are now in use at the Drummond and Vale Collieries ; two at Hon. Senator Muirhead's saw-mills at Chatham ; also boilers and engines at the Oxford Manufacturing Co., Oxford ; Reed's furniture factory, Bridgetown ; Carmichael & Co.'s saw-mill, New Glasgow ; the saw-mills at Scots Bay, King's County ; and the steamers *Wellington*, Antigonish ; *Lion*, Georgetown, P. E. I. ; *Bertha*, Halifax ; and *Alpha*, Georgetown, P.E.I. Most of the steam hammers now in use in this Province were built by this firm. They have also rollers made by themselves capable of rolling plate one inch thick and eight feet wide.

We direct the attention of our readers to the advertisement of Messrs. Matheson & Co. in this issue of the CANADA LUMBERMAN.

OUR QUEBEC LETTER.

END OF THE EXCITEMENT IN WHITE PINE.—INCREASED DEMAND FOR OAK.—PRICES CURRENT, &C.

QUEBEC, Aug. 26.—There has been some little excitement in white pine since the date of my last letter, but a calm has followed, and there is not presently any particular reason to apprehend that it will be seriously disturbed for some little time to come. A few choice rafts of Kippewa and Michigan timber changed hands some ten days ago at prices which have rarely been reached here before. A raft of Michigan waney pine of 21 inches sold as high as 40 cents. Two other rafts of the same timber of 19 inches sold one for 36 cents, the other for 38 cents. An Ottawa raft of 48 feet changed hands at 24 cents, and one of 42 feet at 19 cents, with red pine 29 feet at about 13 cents. About the same time bright pine deals, which were not in very great demand, were sold at $102, $65 and $34, and spruce deals at $38, $26 and $22. During the past week the feeling has been quieter, the only sales made being as follows :—Three good rafts of white pine, 58½ feet average, at 30 cents, 53 feet average at 29 cents, and 47 feet average at 27 cents per foot.

Advices from England are to the effect that the demand is not very great ; still it must be remembered that the stocks held here in first hands are very light.

It is perhaps fortunate for lumbermen that the prices obtained a fortnight ago are not likely to be maintained. As stocks are so light, very few of those in the trade would have gained by their continuance, while a score or two of inexperienced firms or individuals would probably have rushed into the manufacture of timber this fall, and brought ruin upon themselves and disaster to the trade. The opinion of those competent to form such here is that every precaution must be used this year in the production of stocks, or with the vast quantity of logs remaining in the water from last year, another glut will be certain to occur.

Waney board pine, first class wood, 19-inch average, in shipping order, is now offered at 39 cents per foot.

Red pine is in excess of the demand, and only choice wood of large average is asked for. A prime raft of 42 feet average has been sold at 20 cents, and two rafts of fair average quality, 37 feet average, at 17 cents, and 32 feet average at 15¾ cents per foot.

Oak is, as predicted some weeks ago, maintainining its price and in much greater demand. The movement to bear it has fallen through, and shippers having run low in stock, have now to buy. A lot of about 55,000 feet, 60 feet average, and only medium quality, has changed hands at 45¼ cents.

Elm is not much sought after.

Pine deals remain as quoted above. Spruce deals are being bought in small quantities by shippers who have run short. Prices remain at $38, $27 and $22.

Freights are just now remarkably low, ships having been chartered this week at 19s. to the Clyde for timber, and 59s. 6d. to London for deals. The figures will not long remain so low, however.

A new era in the trade is marked by the shipment of the first cargo last week of a consignment of Kippewa timber from above Ottawa to Quebec by the Q. M. O. & O. railway. The price per car has not transpired. The timber belongs to Allan Grant, and is shipped here to order of Cook Bros. & Co., whose agent rafts it alongside the Commissioners' wharf, where it is thrown into the pond from the cars direct, and tows it to his cove. The facilities here for these shipments are very good.

Nothing has yet been settled here with reference to the Supervisorship. The trade is united on one point, namely, that none but a duly qualified party must be appointed.

The following is the latest comparative statement of timber, masts, bowsprits, spars, staves, &c., measured and culled to date :—

Waney White Pine.	1,060,844	1,380,102	1,374,887
White Pine	2,105,593	2,956,470	4,220,802
Red Pine	530,555	696,097	1,137,392
Oak	610,789	1,104,979	1,902,774
Elm	274,650	786,368	921,603
Ash	47,133	215,643	328,565
Basswood	280	206	3,356
Butternut	70	588	1,056
Tamarac	6,654	20,871	22,585
Birch and Maple	120,003	555,534	138,942
Masts & Bowsprits.	50 pcs	.....	.....
Spars	3 pcs	21 pcs	.....
Std. Staves	76.9.0.8	16.4.3.15	255.7.3.10
W. I. Staves	117.1.3.27	260.0.0.22	301.6.0.25
Brl. Staves	.....	.....	.....

The New Mill.

A few days after Mr. Gilmour's return from the American side, whither he had gone on a tour of inspection among the saw mills of that country, dame rumor busied herself with the propagation of many idle stories. One man had it that Mr. Gilmour had sold out to Rathbun & Son ; another that the business was about to be removed to Belleville. Soon this bit of information was supplemented by the sayings of some one deeply in the secrets of the Gilmour, affirming with an ominous look that there was a "split in the firm ;" that the old country member of the firm was opposed to rebuilding. Thus it might be expected that for a short time the nervous would be disposed to believe that Trenton was about to meet with a great loss. However, the fears implanted in the breasts of the timid ones were soon dispelled, as within an incredible short space of time Mr. Gilmour showed that not only was it the intention of the firm to rebuild, but indeed, to rebuild as fine a mill as could be found in the Province. If for a few days the mill was run with fewer hands what did it matter? The people could not have known the intention of Mr. Gilmour. To-day the mill is running day and night, and the hands paid $1.25 per day. The trouble in this world is that people take rumors as facts—entirely forgetting that secrecy is one of the pillars upholding the business fabric. We do not pretend to be in Mr. Gilmour's confidence, but we predict that 1882 will be a most prosperous year for Trenton, and that such prosperity will be largely induced by the new mill and its six or seven hundred men.—*Trenton Advocate.*

FOR SALE.

The Dexter & Whitwam Manufacturing Company, offer for Sale the Entire

Real Estate Plant and Machinery

OF THEIR EXTENSIVE

BENDING & TURNING FACTORY

Situated in the City of St. Thomas, in the County of Elgin, Ontario. For full particulars apply to H. BROWN, Manager, or E. MOORE, President. L20tf

AUCTION SALE

OF

VALUABLE LIMITS,

Situate on the Gatineau River and Lake Keepawa, 387½ Square Miles.

The following valuable limits owned by Messrs. Ross & Co., of Quebec, will be sold at Public Auction at the Grand Union Hotel, in the city of Ottawa, on

Tuesday, the 20th Day of September

NEXT, at half past two o'clock, p. m., viz :—

	Sq. Miles.
Lake Keepawa, Berth No. 48	50
" " " " 49	30
" " " " 54	30
" " " " 55	50
Total	160
	Sq. Miles.
Gatineau River, License No. 189	50
" " " " 190	50
" " " " 191	50
" " " " 192	50
" " " " 193	27½
Total	227½

The Keepawa limits are in a good pine country, and adjoin limits owned by David Moore, J. R. Booth, John Ross, of Quebec, and the British American Lumbering and Timber Company.

The Gatineau Licenses front on the river, and adjoin valuable limits owned by Gilmour & Co., and Hamilton Bros.

These limits are admirably situated for lumbering purposes, and well worthy the attention of the trade or speculators.

Terms and conditions of sale, which will be liberal, will be announced at the time of sale, or can be had from the Vendors, Messrs. Ross & Co., Quebec, or from

O'CONNOR & HOGG,
of Ottawa, Solicitors for Ross & Co

August 23rd, 1881. 2L21

KERR BROTHERS

PRACTICAL

Founders, Machinists,

And Millwrights.

Manufacturers of Marine and Horizontal and Portable

Engines, Boilers

Grain Elevators & Steam Hoists,

Saw and Flour Mill Machinery.

With Latest Improvements A SPECIALTY.

The ABEL EDWARDS CENTENNIAL TURBINE WATER WHEEL.

RODEBAUGH'S SAW FRAME, MILL DOGS and SAW GUIDES.

WATER WORKS, THE LATEST AND MOST IMPROVED, MADE TO ORDER.

LIGHT and HEAVY BRASS and IRON CASTINGS.

☞ Plans and Specifications on application. ☜

The Walkerville Foundry

AND

MACHINE WORKS.

Walkerville, Ont., June 1881. 12L16

AUCTION SALE

OF VALUABLE

Timber Limits,

Situated Near Lake Nipissing.

Notice is hereby given that (if not previously disposed of by private bargain) the following Valuable Timber Limits will be offered for sale at Public Auction at the Grand Union Hotel, in the

CITY OF OTTAWA,

ON

Tuesday, the 20th Day of September Next,

AT 2.30 P.M., VIZ. :

	Sq. Miles.
Berth No. 23, on the River Bueve, near Lake Nipissing, comprising	36
Berth No. 43, on the River Wannapitac, near Lake Nipissing, comprising	36
Berth No. 51, on the River Wannapitac, near Lake Nipissing, comprising	36
In all	108

These limits contain, in the aggregate, a large quantity of magnificent pine timber.

Berth No. 23 is estimated—as the result of a recent exploration—to contain a quantity of trees sufficient to produce at least half a million cubic feet of square timber, besides two hundred and fifty thousand standard saw logs. The river is available for driving to Lake Nipissing.

There is a good mill site on the Bueve river, about three miles from Lake Nipissing.

Lumber could be transferred thence by water to the Callender station of the Canada Central Railway, the line of which is projected to pass directly through this limit.

Lumbermen and others desirous of acquiring limits are invited to examine these berths in the interval preceding the day of sale.

The owners reserve the right to dispose of either or all of them by private bargain in the meantime, and will be ready to consider any offers that may be made.

Terms of purchase will be liberal, and will be made known before the sale, the place and hour of which will be duly advertised.

Persons desiring further particulars are invited to communicate with the undersigned.

STEWART, CHRYSLER & GORMULLY,
Solicitors, Ottawa.

J. B. TACKABERRY, Auctioneer.

Ottawa, 28th July, 1881. 3L20

A RARE CHANCE.

AUCTION SALE OF

Valuable Timber Limits

—AT—

OTTAWA,

On the 20th of September.

On Lake Nipissing.

License No. 455, Sixty Square Miles Area, situated on the head waters of the Mattawa and South Rivers. This limit is wooded with Pine of the very best growth and quality. Timber cut thereon can be taken out either via the Mattawan to the Ottawa River, or by Lake Nipissing and French River to Georgian Bay with the greatest convenience.

In connection with this limit is a well improved farm of about 200 acres, deeded property, 100 acres cleared, with buildings, stock and crop, all of which will be sold at valuation.

There are also Six Timber Births numbered 12, 20, 36, 37, 39 and 31, situated on the River Beuve and Western Arm Bay, each 36 miles square. These limits have never been worked, and abound with the very finest quality of white Pine. Access from Georgian Bay via French River is quite easy. The Canada Pacific Railway passes in the neighborhood of these limits.

On the Georgian Bay.

License 169, on the Missisaga River, consisting of 36 square miles area, and License No. 200, situated on the Thesselan River, consisting also of 36 square miles area. These limits have never been worked and are covered with an abundance of the best Pine Timber.

The above limits will be sold on the 20th September at the Grand Union Hotel, Ottawa. Conditions made known on day of sale. For particulars apply to R. NAGLE, Ottawa ; JOHN SCULLY, commission merchant, Toronto ; or to J. T. LAMBERT, 62 Wellington Street, Ottawa. 2L21

J. T. LAMBERT,

Lumber and Commission Agent.

FOR SALE.

150 Mlls.	White Pine,	1 x 10 Stock.
175 "	do	1 x 12 "
11 "	do	2 x 10 "
20 "	do	2 x 12 "
140 "	do	1 inch Siding.
20 "	do	1¼ "
40 "	do	2 x 10 Joists.
16 "	Cedar,	3 x 6 "
19 "	Basswood,	1¼ inch.

APPLY AT THE OFFICE, L20

WELLINGTON STREET, OTTAWA.

Market Reports.

TORONTO.

Mill cull boards and scantling	$ 9 00
Shipping cull boards, promiscuous widths	12 00
" stocks	13 00
Scantling and joist, up to 16 ft	12 00
" " " 18 ft	12 00
" " " 20 ft	12 50
" " " 22 ft	13 00
" " " 24 ft	13 50
" " " 26 ft	14 50
" " " 28 ft	15 50
" " " 30 ft	17 00
" " " 32 ft	18 00
" " " 34 ft	20 00
" " " 36 ft	22 00
" " " 38 ft	25 00
" " " 40 to 44 ft	30 00
Cutting up planks to dry	18 00
" boards "	16 00
Sound dressing stocks	15 00
Picks Am. inspection	26 00
Three uppers, Am. inspection	32 00
1½-inch flooring, dressed	28 00
1½ " " rough	14 00
1¼ " " dressed	24 00
1¼ " " undressed	14 00
1 " " dressed	20 00
1 " " undressed	15 00
⅞ Beaded Sheeting, dressed	20 00
Clapboarding, dressed	12 50
XXX sawn shingles, ℔ M	3 00
XX sawn shingles	2 00
Sawn Lath	1 50

MONTREAL.

From Our Own Correspondent.

SEPTEMBER 9.—The shipping business has been pretty active since the date of our last report, and August orders are now nearly all filled, and there is only one vessel loading now for South America. The shipping for this season is about closed. Rates of freight are $13@16. Shipments since the 22nd ult. were: To Adelaide, Australia, 294,313 feet and 30,000 lath; Antwerp, 150,000 feet; Cook, f.o., 150,000 feet; London, 53,800 feet; Liverpool, 462,320 feet and 24,367 deal ends; Buenos Ayres, 1,385,126 feet; Monte Video, 947,490 feet. The total shipments to the River Platte since the opening of navigation to date were 7,316,806 feet, against 3,332,808 feet for the same period of 1880, being an increase in shipments of 3,893,998 feet.

The total lumber trade for building purposes has been quite active, and some large transactions are taking place, and, although we do not make any change in quotations, prices continue firm as under :—

Pine, 1st quality, ℔ M	$32 00@40 00
Pine, 2nd " ℔ M	18 00@24 00
Pine, shipping culls, ℔ M	12 00@15 00
Pine, cull deals, ℔ M	8 00@10 00
Pine, mill culls, ℔ M	5 00@ 6 50
Spruce, ℔ M	8 00@10 00
Hemlock, ℔ M	8 00@10 00
Ash, run of long culls out, ℔ M	16 00@18 00
Bass, " " ℔ M	14 00@16 00
Oak, ℔ M	35 00@45 00
Birch, ℔ M	17 00@20 00
Hard Maple, ℔ M	18 00@25 00
Lath, ℔ M	1 25@ 1 35
Shingles, 1st, ℔ M	3 00@ 0 00
Shingles, 2nd, ℔ M	2 00@ 0 00

CORDWOOD.—The demand for cordwood is poor, and likely to be so as long as the present very warm weather continues. Prices in the meantime are in buyers' favor. We quote :

Red Tamarac	$ 4 50@ 5 00
Hard Maple	5 50@ 6 50
White Birch and Soft Maple	5 00@ 0 00
Red Birch	5 50@ 6 00

LONDON, ONT.

From Our Own Correspondent,

SEPTEMBER 9.—Among the many vicissitudes of a commercial life the crowning one is a collapse; and it is my painful duty to record in this letter the cessation of the firm of G. E. Hargreaves, lumber merchant, of this city. This firm has been in business between three and four years, and held a high rank in the trade. To-day a meeting of creditors takes place, and there will probably be about twenty creditors or their representatives present from Toronto and the north. The estate, as far as I can learn, will show up very poorly, but I would prefer not to give any approximation in this letter; in my next I will give a result of to-day's meeting.

The bush fires on the W. G. & B. and L. H. & B. railways in the vicinity of Wingham, Blyth, Bluevale, &c., are creating great devastation, and less lumber is coming into this market in consequence, some parts of the road at times being blocked by barriers of flame.

The principal lumber men in this city may be classified as follows: Wm. Willis, James H. Belton, Ferguson Bros., H. C. Green, G. E. Hargreaves, and W. H. Winnett. Of course there are quite a few others doing a smaller business. One of the above mentioned firms purchased yesterday three million feet of pine lumber on the line of the L. H. & B. railway.

The market, as predicted, has greatly improved since my last letter, and I may safely assert that there will be no let up until we have the first precursor of King Frost. All grades of common lumber are presenting indications of a rise, and shingles continue to be scarce. Cars on the G. W. R. are plentiful, but are scarce on the G. T. R.

In conversation with a Goderich lumber merchant this morning he informs me that his firm and another one conjointly have brought into that town twenty-five million feet of lumber during the past year, and nearly all from the Georgian Bay district.

QUOTATIONS.

Mill cull boards and scantling	$ 8 00
Shipping cull boards, promiscuous widths	10 00
" " 10 and 12 in. stocks	10 50
Common boards, promiscuous widths	13 00
Scantling and joist, up to 16 ft	14 00
" " " 18 ft	14 50
" " " 20 ft	15 50
" " " 22 ft	16 50
" " " 24 ft	18 00
Common stocks	14 00
Common 2 in. plank	13 00
Cutting up plank and boards	18 00
Sound dressing stocks	17 00
Clear and picks	28 00
Three uppers, Am. inspection	35 00
1½ inch dressed and matched flooring	20 00
1¼ " " " "	20 00
1 " " " "	20 00
XXX sawn shingles, ℔ M	3 25
Lath per 1000 feet	4 25

OTTAWA.

From Our Own Correspondent.

SEPTEMBER 10.—The lowness of water and consequent limited supply of logs is affecting materially the cut of lumber at the mills of this locality. There is very little lumber left to be sold, the producers declining to sell before stock is in hand. The mills of the Chaudiere, New Edinburgh and the Gatineau are not running more than half-time, so that it is quite evident the cut for the season will be largely reduced. Present quotations are as follows :—

10-inch stocks, with shipping culls and better per M	$14 00@15 00
12-inch stocks, with culls	18 00
12-inch stocks, without culls	22 00
Sidings, best qualities	28 00@30 00
Sidings, 1-inch kind	25 00

There is a great demand for lath, and the price has increased to $1 per thousand. Montreal and American buyers have bought largely this season. The supply of lath is not equal to the demand.

The last raft of square timber by water is on its way to Quebec, having left this point some days ago. The price for timber this season is much higher than for a great many years past. Waney board quality has brought as high as 40 cents per foot.

Shipping of lumber is somewhat slack at present. The rates remain unchanged, but if the water remains low and the cut of lumber continues small, they will shortly rise. The following are the present rates :—To Montreal, $1.25 per M.; Quebec, $2 per M.; Burlington, $2 per M.; Whitehall, $2 per M.; Albany, $3 per M.; New York, $3.25.

The final sweep of the Gatineau log drive is within eight miles of the city, but it will take about ten days to have it completed.

The drive on the Upper Ottawa is progressing slowly, owing to the large number of logs which have become stuck in the rapids.

Word has been received that the timber limit of Mr. J. R. Booth, on the Temiscamingue, has been badly swept by fire. It is not known that the limits of any other Ottawa lumberman have been damaged to any extent by fire.

OSWEGO, N.Y.

SEPTEMBER 12.—The following are the quotations :—

Three uppers	$42 00@45 00
Pickings	32 00@35 00
Fine, common	20 00@25 00
Common	14 00@18 00
Culls	11 00@13 00
Mill run lots	17 00@22 00
Sidings, selected, 1 inch	30 00@33 00
1¼ inch	30 00@38 00
Mill run, 1x10, 13 to 16 feet	16 00@20 00
selected	20 00@25 00
shippers	15 00@16 00
Strips, 1 and 1¼ inch mill run	14 00@18 00
Culls, selected	22 00@30 00
Culls	10 00@13 20
1x6 selected for clapboards	25 00@40 00
Shingles, XXX, 18 inch, pine	3 75@ 3 90
XX, " "	2 75@ 2 90
XXX, 18 inch, cedar	3 00@ 3 25
XX, " "	2 25@ 2 40
Lath	1 40@ 1 50

ST. JOHN, N. B.

From Our Own Correspondent.

GENERAL REMARKS.—We have arrived at that stage of the season's business when for a longer or shorter period there is usually very little calling for special remark with reference to the lumber trade; the rush of the spring and summer shipments being over, with a sort of intermission before fully entering upon the fall operations, a state of quietness prevades all branches of the trade. The only remarkable occurrence of the period was the destruction by fire of Messrs. Hilyard Bros.' saw-mill. The destruction of this mill, although a serious loss to the owners, will not cause any disturbance to the trade generally, as the available supply of saws in operation in and about the city is quite sufficient to cut all the logs that come to this market; indeed, the mill in question was at the time being supplied with logs cut on the bay shore, and brought in from the sea, so to speak —quite a novel feature of our lumber trade. It is reported that the Messrs. Hilyard intend rebuilding, but I do not know whether the report is correct or not. Prices of deals remain steady at $8.50 to $9.00 per M.

FREIGHTS.—The freight market continues firm, rates running about the same as last reported, viz., 57. 6d. for principal English ports, at which rate several vessels have been fixed.

VESSELS IN PORT.—The following is a list of the vessels in port, with their tonnage and destination :—

John Murphy, 1479, Liverpool.
Missouri, 818, ——
Vestfold, 500, E. C. I. or W. C. E.
Huron, 774, Liverpool.
Wm. A. Campbell, 1538, Liverpool.
Industrial, 350, United Kingdom.
Carlew, 345, Bristol Channel.
Talavera, 384, Bristol Channel.
Eurydice, 1247, Liverpool.
W. N. H. Clements, 428, Swansea.
Belle O'Brien, 1902, Liverpool.
Thor, 343, France.
Freeman Dennis, 808, Liverpool.
Crown Jewell, 716, Limerick.
Artizan, 1140, Liverpool or Barrow.
Seaward, 668, Penenth Roads.
Antwerp, 573, ——
Ella, 332, Glasgow.
Nettie Murphy, 1373, Liverpool.
Minnie Burrill, 1465, Liverpool.
Herbert Beech, 1061, Liverpool.
Annie Burrill, 897, ——
St. Julien, 1049, Liverpool, Barrow or Bristol Channel.
Anna P. Odell, 379, ——
Rothemay, 1200, Liverpool.
Maggie M., 429, ——
Arklow, 638, ——
Mary A. Kerston, 344, Dundalk.
W. E. Heard, 587, ——

SHIPMENTS.—The shipments of deals and other sawn lumber are as follows :

For Europe.....7,604,000 Sup. feet.
" United States..3,500,000 "

St. John, N.B., Sept. 6, 1881.

From Another Correspondent.

SHIPMENTS OF LUMBER.—The following is a statement of the clearances of lumber at St. John, N. B., for transatlantic ports for August, 1881 :—

45 vessels containing—	
Deals, battens and ends	26,875,368 sp. ft.
Boards and scantling	676,792 "
Palings	97,620 pcs.
Birch timber	788 tons.

Below are the clearances at St. John, N. B., for transatlantic ports from 1st January, 1881, to 1st September, 1881 :—

Deals, battens and ends	133,994,143 sp. ft.
Boards and scantling	4,201,613 "
Palings	284,965 pcs.
Pine timber	768 tons.
Birch	3,609 "

The English market continues to remain fairly firm and satisfactory to shippers. We learn of one cargo sold to arrive at Garston dock at £6 16s. c.i.f., which would be about equal to a sale at £7. 2s. 6d. in Liverpool in the usual way.

THE AMERICAN MARKET.—In New York laths have shown an upward tendency, and recent lots have sold as high as $2.26, but this price will hardly hold long, for shippers will forward laths as fast as possible. Cargoes of wide stuff command ready sale, and we can quote from $15 to $17 for 10, 11 and 12-inch lumber. In Boston, owing to heavy arrivals, the market has weakened somewhat, and laths are quoted there at $1.70; spruce boards, &c., at $13.

Freights have lately dropped a little, and while the most of the chartered vessels in port have obtained 57s. 6d., we know of two recent charters at 55s., one for Liverpool and one for Bristol Channel.

Coastwise freights are firm at $3.25 for New York, $3 for Sound ports, and $2.50 for Boston. Logs are held at $7 to $8, and deals are worth about $8.50 per M., with few outside arrivals to report.

Fire has been busy lately among the mill owners. On the 6th instant a mill belonging to E. D. Jewitt & Co. was burned, on which there was no insurance. The loss is estimated at from $15,000 to $20,000. We believe it is not the intention of the owners to rebuild, as they will occupy another mill in the neighborhood which is unused at present.

Hilyard Bros., the loss of whose mill by fire you reported in your last issue, have decided to rebuild, and are busy clearing away the ruins.

St. John, N.B., Sept. 9, 1881.

CHICAGO.

SEPTEMBER 7.—Prices remain unchanged, practically, although during the week sales were made at quite a reduction from the regular market prices. The following are the quotations :—

CARGO QUOTATIONS.

Joist and scantling, green, ordinary lengths	$11 00@11 25
Joist and scantling, green, 20 feet and over	12 00@15 00
Mill run, choice green	16 50@21 00
Mill run, medium, green	13 00@16 50
Mill run, common, "	11 00@13 00
Shingles, standard	2 65@ 2 75
Shingles, extra A	2 70@ 2 90
Lath	1 85@ 1 90

LAKE FREIGHTS.

Manistee	$2 12½
Muskegon	1 62½
Ludington	1 87½
Grand Haven	1 62½
Menominee	2 12½
Sturgeon Bay	2 12½
White Lake	1 75
Ford River	2 00

Receipts and shipments of lumber and shingles for the week ending September 6 :

	RECEIPTS.		SHIPMENTS.	
	Lumber.	Shingles.	Lumber.	Shingles.
1881	43,158,000	20,460,000	44,824,000	35,130,000
1880	56,563,000	21,840,000	46,628,000	25,164,000

Receipts and shipments of lumber and shingles from January 1 to and including September 6 :

	RECEIPTS.		SHIPMENTS.	
	Lumber.	Shingles.	Lumber.	Shingles.
1881	1,166,734,000	505,090,000	1,090,078,000	509,520,000
1880	982,280,000	430,799,000	950,902,000	438,983,000

BUFFALO.

SEPTEMBER 12.—The following are the latest quotations for cargo lots :—

Uppers	$40 00@45 00
Common	17 50@20 00
Culls	11 50@12 50
Dressing stocks	18 00@20 00
Dressing sidings,	17 00@19 00

TONAWANDA.

CARGO LOTS—SAGINAW INSPECTION.

Three uppers	$40 00@45 00
Common	17 50@20 00
Culls	11 50@12 50

LONDON.

The *Timber Trades Journal*, of August 27th, says :—All things taken together seem to point to a considerable firmness in the position of the wood trade in both the London and provincial markets, and though the improvement is slow, unless interrupted in the manner described, it is likely to be steady, and that says a great deal. We take it as rather a good sign that the trade are feeling their way so cautiously, and not jumping to any hasty conclusions. As far as the metropolis is concerned, it is as clear as daylight that there must be a strong undercurrent of business to keep the dock deliveries every week so much in advance of those of last year, and, in spite of the talk about general depression, facts bear us out in stating that things in that respect are not half so black as they are painted. If we had only been blessed with a fine harvest, we should probably have seen prices much higher this fall than they were last: as it is they rule much the same, but the situation is so different now that everything is hopeful, while nothing but gloomy anticipations surrounded us twelve months ago.

THE GREAT TRIUMPH of the 19th century is the great medical climax Burdock Blood Bitters, cures all diseases of the blood, liver and kidneys, nervous and general debility, and is the purest and best tonic in the world.

LIVERPOOL.

The *Timber Trades Journal*, of August 27th, says:—The importation during the past week has shown a slight increase over the average of the preceding ones, but not to any extent.

Everything points towards the continuance of a moderate import for the year, and this, together with the firm attitude held by sellers in the various shipping ports, has had the effect of steadily raising prices. So far as North American spruce deals are concerned, prices are yet below an average value, and with the increased price abroad a still further advance is looked for, and will doubtless be obtained during the the coming week.

Latest advices from Quebec show that no reduction from the high rates already paid there for pine timber is at all likely to take place—in fact, the appearances are all the other way; and as the stock on hand there is short, the highest prices ever known have been paid for some rafts of good quality. This will make the cost of importation heavy, and consumers who are in want of this description will not mend their position by waiting for later arrivals.

GLASGOW.

The *Timber Trades Jounarl*, of August 27th, says:—Imports of foreign timber to the Clyde during the past week have been to the extent of about 5,000 loads, consisting of two cargoes teak, one of Quebec timber and deals, and several parcels of wainscot billets, American and Italian walnut, &c. The tonnage employed for the conveyance of teak imported to Clyde since the beginning of the year aggregates 7,819 tons, being rather more than for the corresponding period of 1880; last arrivals this year were in March. There has been a falling off in the imports of birch this year, the arrivals from Quebec and lower ports amounting to 5,000 logs, as against 8,000 last year at corresponding date.

A public sale was held here on the 23rd inst., Messrs. Singleton, Dunn & Co., brokers, the goods offered consisting chiefly of New Brunswick spruce deals and Pictou, N.S., birch timber. The attendance was good, and a fair portion of the catalogue was disposed of at the following rates:—Pictou birch timber, about 500 logs sold, one parcel of 20 logs, average 17¼ inch square (some logs figured) at 1s. 7¼d. per cubic foot, string measure, the remainder, say from 15-inch to 16-inch average square, at from 1s. 2½d. to 1s. 4d. per cubic foot. A parcel of 39 logs American black walnut (round), from 10 to 19-inch girth, sold at from 2s. 7d. to 4s. 11½d. per cubic foot, string measure, average 3s. 5½d.

For lower port deals suitable for stage planks, box-making, &c., a fair demand still continues.

Lumber Growth on the Pacific.

The *Oregonian* has this to say of the Puget Sound lumber forests:—"The forests of the great Pacific north-west are as yet virtually untouched, and they now offer the most considerable source of supply remaining on the continent. Development of our railway system will, in a few years, give us an immense lumber trade. This interest will be more important than our fisheries, and it may for a time take precedent over our wheat. The railroads will make our vast forests accessible to the great treeless region of the interior, and as lumber is now carried from Michigan to Maine, so it can be carried from Oregon and Washington to Montana and Dakota, and even to Chicago. The rapid settlement of the country to follow railroad construction will create a mighty demand for lumber over half a million square miles of territory. Within a few years our mountains, where the chief supply is, will be penetrated in all directions and at all points, and the lumber will be run out on tramways or driven down the streams. Ten years from now it will be an immense business. Nothing can be more sure, for the demand in the open country, from the Cascade range to the Missouri river, will certainly be met by the supply from these western forests."

Zopesa.—A healthy man never thinks of his stomach. The dyspeptic thinks of nothing else. Indigestion is a constant reminder. The wise man who finds himself suffering will spend a few cents for a bottle of *Zopesa*, from Brazil, the new and remarkable compound for clensing and toning the system, for assisting the Digestive apparatus and the Liver to properly perform their duties in assimilating food. Get a 10 cent sample of *Zopesa*, the new remedy, of your druggist. A few doses will surprise you.

SALE OF TIMBER LIMITS.

The Ottawa *Citizen* says that on Thursday afternoon, September 3, at the Grand Union Hotel, there were offered for sale by Mr. James Brewer, auctioneer, the following valuable timber limits situated on the Black river, in the Province of Quebec, which were part of the estate of the late Mr. Michael O'Meara, of Pembroke:—License No. 92, of 1878-9, comprising 50 square miles; license No. 91, of the same year, also comprising about 50 square miles; and license No. 90, of the same year, comprising about 8 square miles. The sale was made in order to wind up the affairs of the estate by order of the executors, Messrs. W. O'Meara, W. Howe and J. Doran. Besides the limits above specified, there was also a farm of about 100 acres of good land on license No. 91, and a considerable quantity of stores, including about 50 tons of good hay. It had at first been intended to put the property up in lots to suit purchasers, but at the time of the sale it was determined to put it up *en bloc*, the purchaser to take the stores on the farm at valuation. The terms of the payment were 10 per cent. cash, the balance in fifteen days, or 50 per cent. of the balance in fifteen days, and the remainder in six months, with interest at 6 per cent. added. The attendance was large, and for a time the competition keen. The auctioneer announced that no bids under $500 would be taken. Mr. McCormick, of Pembroke, started them at $10,000, which bid was doubled by Mr. Alexander Fraser. Five hundred dollars was added to this; then came a bid of $22,000, and from that the figures rapidly run up $1,000 at a time until $36,000 was reached. Here there was a short pause, and they were then slowly $500 at a time until knocked down to Mr. T. W. Murray, of Pembroke, at $38,000.

Spontaneous Combustion.

A French scientist has lately experimented with greasy rags to ascertain the degree of their inflammability under certain conditions. He took for this purpose a quantity of cotton rags, saturated them with boiled linseed oil, wrung them out, and placed them, together with dry cotton, in a box about eighteen inches long, eight inches wide, and two feet high, in which he put a thermometer in order to watch the increase of temperature. The room in which the experiment was made was kept under a temperature of 170° Fahrenheit. The mercury soon began to rise, and showed within an hour and a quarter 340°; smoke commenced to come through the fissures, and as soon as air was let in, the flames burst out. In another experiment, made under the same temperature, cotton, saturated with linseed oil, ignited within five or six hours. Rapeseed oil caused ignition after ten hours. In another room, where the temperature was left at 120° Fahrenheit, cotton, mixed with a little olive oil, and put in a paper, burnt after six hours; castor oil required more than twenty-four hours; whale oil only four hours, and fish oil two hours. Spermaceti oil, free of glycerine, did not ignite at all, neither did heavy tar, coal tar, or slate oils. These experiments show very clearly the necessity for scrupulous watching of oily rags, which are often too carelessly left around after cleaning machinery.

Walnut Burls.

A Chicago harwood buyer recently struck a bonanza in the way of a walnut burl on the Spoon river, in this state. It is fifteen feet long, seven feet, eight inches in diameter at the butt, and six feet, nine inches at the top, not including the sap. The modest sum of $7 was paid for the tree, and in addition it cost $2.50 to hire the burl cut out. It was rolled into the river, but it sunk like a piece of lead. When it was discovered that it wouldn't float, it was pulled upon the bank again by three yoke of oxen and a span of mules, and will be shipped to a veneer mill by rail. The owner considers the log worth $150, but he probably would not sell it for twice that amount. This recalls to mind a burl that was bought in Indiana some fifteen years ago for $10. It was sent to Sandusky by rail, thence by water to New York, where it was cut into veneers. The veneers were brought back to Buffalo and sold, the lucky operator clearing over $3,000 on his $10 investment.—*Northwestern Lumberman.*

MILL SUPPLIES.

Extra Stretched and Patent Smooth Surface

RUBBER BELTING—in Stock, 2, 3, 4, 5, and 6 Plies.
HOYT'S CELEBRATED LEATHER BELTING.
COTTON BELTING, for Flour Mills. &c., Superior Quality.

DISSTON'S CELEBRATED MILL SAWS.

Steam Packing of all kinds, Rubber and Linen Hose, Silk Bolting Cloth, Emery Wheels, Lacing Leather (Page's Genuine), Lard, Seal, Cylinder, Spindle, West Virginia and Wool Oils. Our Stock includes Mill Supplies and Rubber Goods of all kinds. ☞Quotations furnished for any part of Canada. 21

ESTEY, ALLWOOD & CO., SAINT JOHN, NEW BRUNSWICK.

A PLANING MILL BURNED.

London, Sept. 11.—This afternoon a most disastrous fire occurred in this city. About four o'clock flames were noticed issuing from a shed at Green's planing mill, and although the fire brigade were quickly on the spot the flames had obtained such a hold that the whole of the sheds, brick planing mill, and brick cottage adjoining were razed to the ground. The whole of the valuable machinery, the mill being the most complete and best equipped west of Toronto, is a total loss, and a number of workmen are also sufferers to the extent of their kits of tools, some of which were worth $150. A quantity of finished stuff ready for use at the Masonic Temple, and other new buildings were destroyed. Mr. Green's loss is placed at $25,000 on which their is an insurance of $5,000. Many narrow escapes are reported. Several of the workmen, while attempting to save their tools, were forced by a sudden rush of flames to jump for their lives, and sustained painful injuries by falling upon odd tools which had been thrown out. The falling walls also made things lively for the firemen. The lumber in the adjoining lumber yard of Mr. H. C. Green ignited several times, and some piles were badly damaged. The office and buildings in the coal yard of Messrs. Bowman & Co., on the other side of the mill, were also scorched.

NEW BRUNSWICK NOTES.

Upper Province Canadians, in supplying New York and other large eastern markets, ship wide 10-inch and upwards. This the lower provinces cannot compete in with their narrow board lumber, the logs of the Provinces of New Brunswick and Nova Scotia being now comparatively small.

A city ordinance of New York requires that all spruce deals used be not less than 16 feet long by 10 to 15 inches wide. This size is regularly sorted out by New Brunswickers, and reserved for that market, and the balance, as mixed lots, sent to other points.

There had existed in southern New Brunswick a large industry to the consumption at times of 1,300,000, and now about extinct. Last year the amount was 300,000 only. There was a growth of rough, crooked trees on the right bank of the St. John river. This was utilized for the manufacture of boxes, each one consuming 28 or 29 feet of lumber. These were shipped to the West Indies, and known as "shooks," where they were filled with sugars. They were worth here about 50 to 75 cents, and sold in Cuba for from 8 to 10 reals—equal to $1.10 or so—the increased cost being the addition of a duty of 29½ cents imposed by the Cuban Government, and the freight. The firm of Fleulling & Co., of Hampton, N. B., are at present manufacturing something similar, in the shape of small boxes, to be sent to the Bermudas for the onion trade. There will be used for this purpose 600,000 feet of spruce this season.

Cement for Leather.

Equal parts of common glue and isinglass; soak ten hours in just enough water to barely cover, bring gradually to a boiling heat, and add pure tannin until the whole becomes ropy, or appears like the white of eggs. Buff off the surfaces to be joined, apply the cement, and clamp firmly.

Beautifiers.

Ladies, you cannot make fair skin, rosy cheeks and sparkling eyes with all the cosmetics of France, or beautifiers of the world, while in poor health, and nothing will give you such good health, strength, buoyant spirits and beauty as Hop Bitters. A trial is certain proof.—*Telegraph.*

THE TENURE OF LIFE.

An industrious German, Baron G. F. Kolb, has lately compiled a book of universal statistics which furnishes much food for thought. His figures show that every advance made by a people in morality, in profitable and healthy employment, and useful knowledge brings it nearer to the ideal—the greatest natural tenure of life. Domestic virtue also tells favourably on the health and wealth of a population. Thus in Bavaria, out of 1,000 children born alive there died, of legitimate children, 248 boys and 212 girls; of illegitimate, 361 boys and 342 girls. Out of 100 children succled by their mothers, only 18.2 died during the first year; of those nursed by wet nurses, 29.33 died; of those artificially fed, 60 died; of those brought up in institutions, 80 died in the 100. The influence of prosperity or povery on mortality is also shown by Baron Kolb. Taking 1,000 well-to-do persons and another 1,000 of poor persons—after five years there remained alive of the prosperous, 943; of the poor, only 655. After fifty years there remained of the prosperous, 557; of the poor, 283; at seventy years of age there remained 235 of the prosperous, and of the poor, 65. The average length of life among the well-to-do was 50 years, and among the poor 32 years.

One of the most potent shorteners of life is the anxiety of providing for bare subsistance. The lack of sanitary conditions also shortens men's years. Idleness, as compared to intense industry, outweighs—prejudically outweighs—all the advantages of ease and abundance.

Fall Planting.

The *Rural Canadian* says:—The question is often asked whether spring or fall is the better time to plant fruit and other trees. No answer of universal application can be given. It is undoubtedly an advantage to plant the smaller fruits in the fall. By these are meant raspberries, currants and gooseberries. Being of low-growing habit, they are not affected by the strong winds, and are more easily sheltered from the cold of winter. They will make a more vigorous growth next season, than if planted the following spring. Taller growths that catch the wind are swayed about more or less, and do not get firm hold of the ground. These are better planted in the spring. Evergreens rarely, if ever, do well when planted in the fall. Whether fall planting is practised or not, *fall ordering* is very desirable. It is better to get the young stock, and *heel* in it, than delay until spring. Heeling-in is temporarily planting a bundle of trees, aslant, that may awake a favourable time for spring planting. This has several advantages. Nurserymen are not so driven in the fall as in the spring; can make better selections of trees, in filling your order; pack them more carefully, and be more exact about names. With the trees on hand you can seize the opportune time for setting them out. You are not hurried, for the trees are in good state of preservation, and can be planted with care and deliberation.

By all means order in the fall, whether you plant in fall or spring. Let evergreens be the exception to this rule. They should not be lifted until spring.

Were man to comform *more* to the laws of health and of nature, and be less addicted to the gratification of his passions, it would not be necessary to advertise Fellows' Compound Syrup of Hypophosphites as a restorative for the power of the brain and nervous system, while the world's progress enlightenment would indeed be marvellous.

HART EMERY WHEEL COMPANY, Limited

HAMILTON, CANADA.

GILBERT HART, Detroit, President.
JAMES T. BARNARD, Hamilton, Secretary-Treasurer.
SAMUEL BRIGGS, Hamilton, Superintendent.

MANUFACTURERS OF THE CELEBRATED

DETROIT

EMERY and CORUNDUM WHEELS

These Wheels are Wire Strengthened

And Specially Adapted For Saw Gumming

Neither Animal nor Vegetable Glue or Gum being used in their composition, they are NOT LIABLE TO HEAT, and give out no Odors, while

They Surpass All Other Wheels for Free Cutting and Durability.

We refer to the following well known Saw Manufacturers for Opinions as to the Quality of our Wheels :

Messrs. SHURLEY & DIETRICH, GALT.

Messrs. R. H. SMITH & CO., ST. CATHARINES.

JAMES ROBERTSON, ESQ., MONTREAL.

Messrs. JAMES ROBERTSON & CO., TORONTO.

WE ALSO REFER TO

WILLIAM HAMILTON, ESQ, PETERBOROUGH, Manufacturer of the Covell Saw Sharpeners.

Messrs. H. B. RATHBUN & SON, DESERONTO, Lumber Merchants.

1yL16

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4 QUEEN STREET EAST, TORONTO, ONTARIO.

Trusses for HERNIA, Rupture,

The most Durable and Beneficial kind known to Medical Science always in Stock, and fitted to the Body at Reasonable Prices.

BATTERIES FOR BATHS,

Of Special Sizes, made to order, both for Public and Private Use; and FARADIC BATTERIES always on hand. PRICES LOW. 1yL17

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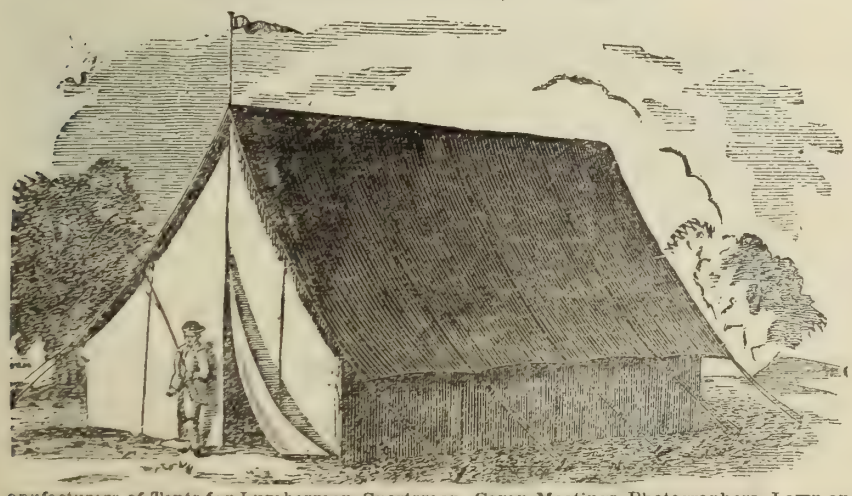
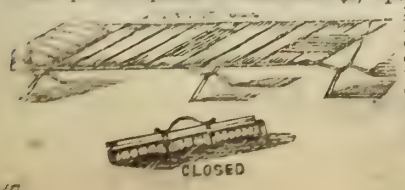


anufacturers of Tents for Lumbermen, Sportsmen, Camp Meetings, Photographers, Lawn and Military Encampments, with or without extra roofs, all sizes and styles, white or fancy striped, fidew proof or plain. Prices from $5, upwards. Flags of all descriptions, (regulation sizes) made of the best of silk-finish bunting. CAMP BEDS (Bradley's Patent) the best bed ever invented; size when folded 2 x 6 in.; 3 feet long, weighing only 11 pounds, but strong enough to bear the weight of any man. Waterproof wagon and horse-covers, tarpaulins sheets, coats and leggings of every description made to order on the premises. ☞Special rates to Lumbermen. Send for catalogue and price list to



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Cast Steel Table Cutlery!

☞Best Cast Steel, Warranted.☜

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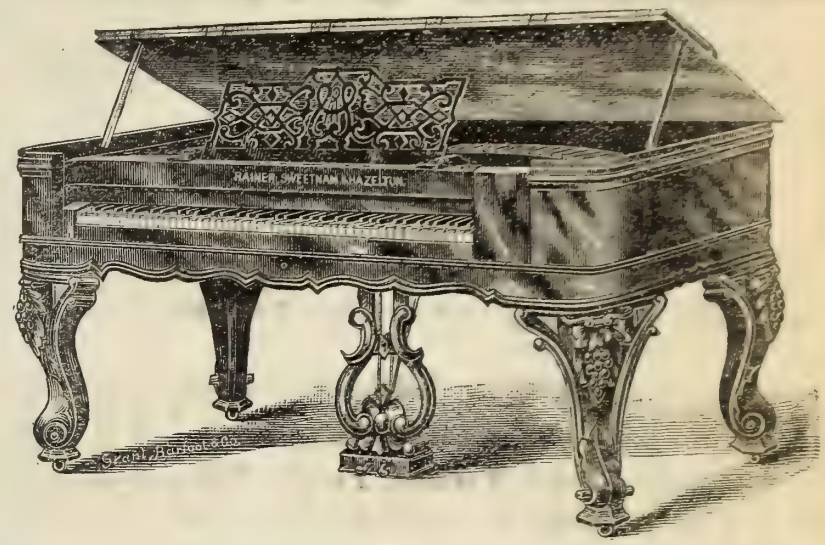
Awarded Diploma and Medal by the New Brunswick Government in 1873.



The Rainer Piano Always Triumphant!

CARRIES OFF THE HONORS OF 1880 AS FOLLOWS:

At Toronto Industrial Exhibition,	1st Prize, Diploma & Medal for Best Square Piano
At Hamilton Provincial Exhibition - - - - - -	1st Prize and Diploma
At Brantford Southern Fair - - - - - - -	1st Prize and Diploma
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RAINER, SWEETNAM & HAZELTON,

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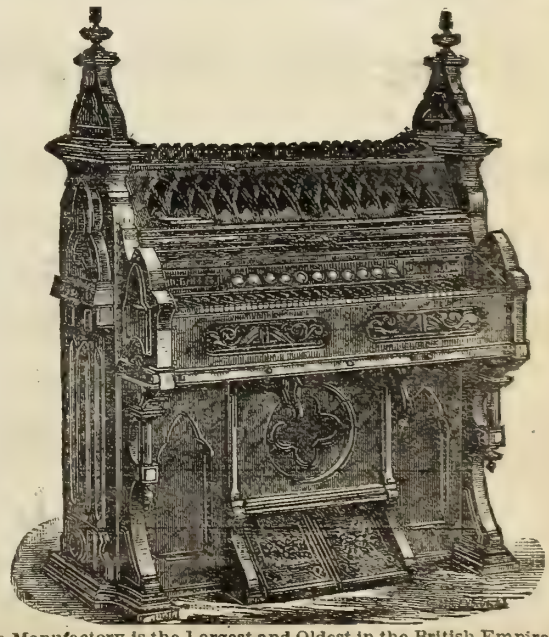
The Crowning Triumph of the Bell Organ

The Bell Organs have just received the HIGHEST AWARD and SPECIAL PRIZE (Gold Medal) at the International Exhibition, Sydney, Australia, this year for their Organs over all the English and American makers. This, along with the unlimited awards, prove that

THE BELL ORGANS LEAD THE WORLD.

WE RECEIVED

Medal and Diploma.....Provincial Exhibition 1871
Medal and Diploma.....Centennial Exhibition, 1876
International Medal and Diploma, Sydney, Australia, 1877



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Only Medal for Parlor Organ, Provincial Exhibition, 1878
Only Medal for Parlor Organ, Industrial Exhibition, 1879
And Gold Medal.....at Sydney, Australia, 1880

The Bell Organ Manufactory is the Largest and Oldest in the British Empire, and the fact that we have sold nearly 15,000 proves that they are the best in the market. We GUARANTEE ALL OUR ORGANS for five years. Correspondence invited. Illustrated Catalogue mailed free.

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We watch the interest of our Customers. Our stock is FULL of the very best goods in Scotch, English and Canadian Tweeds.

We BUY and SELL for Cash, therefore it enables us to do business on very SMALL PROFITS.

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We give a Good Tweed Suit for.....$6 00
We give a Good Tweed Pants for..... 1 50
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AUCTIONEER AND COMMISSION MERCHANT,

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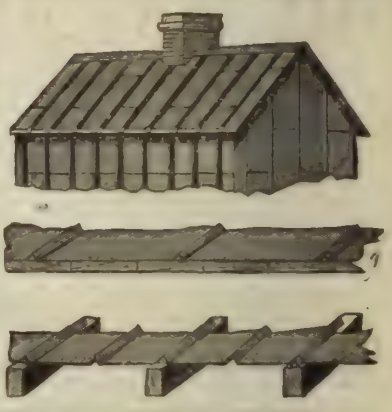

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Book-Binding of every Description got up in a very Neat and Superior manner.

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Will always find a Large Stock of

Shanty Blankets

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HORSE BLANKETS

At LOWEST Mill Price, at

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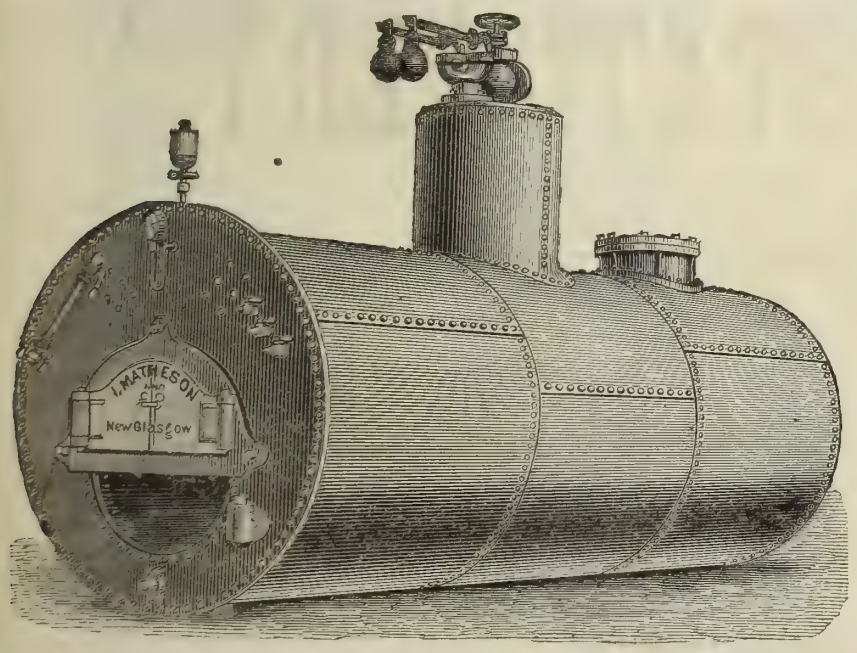
Send Sample Order for our LINED SHAPED HORSE RUG, a Specialty, highly recommended for Wear and Warmth.

6L22



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I. MATHESON & Co ENGINEERS & BOILER MAKERS, NEW GLASGOW, N.S.

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D. McLACHLAN & SONS,

Manufacturers of all Descriptions of

STEAM BOILERS.

SHIPS' WATER-TANKS. Repairing Punctually Attended to.

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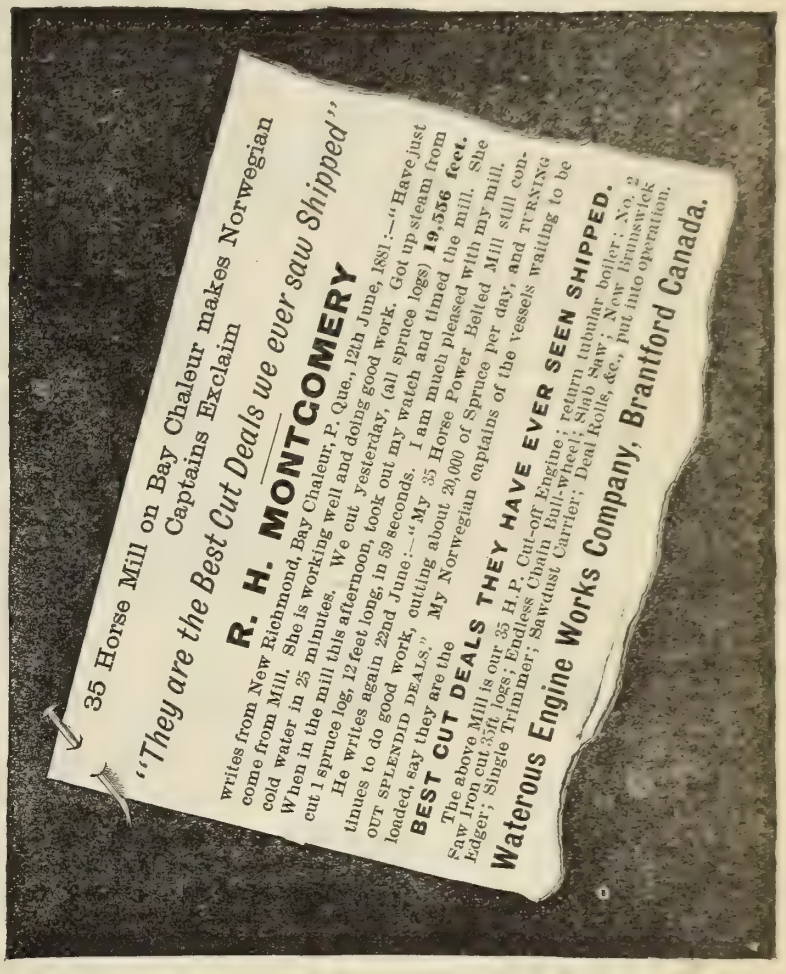
Drake Brothers' Box Mill,

Provost Street Extension, New Glasgow, Picton County, N. S.

SPRUCE, PINE AND HEMLOCK SHINGLES

F. H. DRAKE. L22-1y N. H. DRAKE.



Northey's Steam Pump Works

BOILER FEED PUMPS,
AIR AND CIRCULATING PUMPS,
STEAM FIRE PUMPS, and
WRECKING PUMPS.

MINING PUMPS,
PUMPS SPECIALLY ADAPTED for
OIL PIPE LINES,
And CITY WATER WORKS.

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HAMILTON, ONTARIO.

SEND FOR CIRCULAR. 1J7-1y

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LEATHER BELTING

First Prize, Provincial Exhibition .....Ottawa, 1875
First Prize, Provincial Exhibition.....Hamilton, 1876
First Prize, Provincial Exhibition..... .....London, 1877
First Prize, Industrial Exhibition .....Toronto, 1879
First Prize, Industrial Exhibition .....Toronto, 1880
International Medal, Centennial Ex .....Philadelphia, 1876

None genuine unless with a STAR on the head of rivets. Send for Price Lists and discounts.

6L17

81 Colborne Street, Toronto.

M. Covel's Latest Improved Automatic Saw Sharpener!

Is the Most Perfect Machine that has ever been Introduced into Mills for that purpose.

CIRCULAR SAW STEAM FEED!

I would also call special attention to my

Heavy Circular Saw Mills

and for STEAM MILLS, would recommend the Steam Feed, having put in several which are giving the best of satisfaction, as will be seen by the following testimonials:—

GRAVENHURST, August 20th, 1880.

WM. HAMILTON, ESQ., Peterborough.

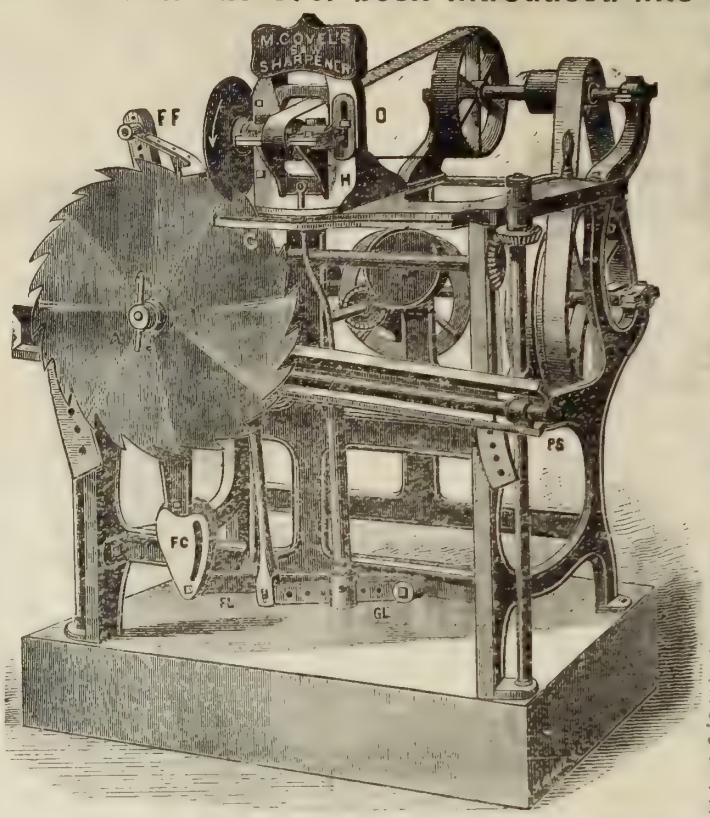
DEAR SIR—I have used your Steam Feed for near four months, and it has given me perfect satisfaction in every way; it is admitted by every person who has seen it work to be the best feed ever invented. Since I put it into my mill, I have not lost ten minutes time fixing anything belonging to it. I can cut 18 boards 13 ft. long in one minute. It can do much smoother and better work than the pinion feed. It is easily governed and reverses the carriages instantly. I am thoroughly satisfied with it and can recommend it to any person who has a Circular Saw Mill for cutting long or short logs. I consider I have cut more lumber than will pay for the Steam Feed since I got it than I would have cut had I not put it in.

Yours respectfully,
WILLIAM TAIT,
Lumberman, Gravenhurst.

TORONTO, August 11th, 1880.

WM. HAMILTON, Peterborough, Ont.

DEAR SIR—The Steam Feed you put in is working splendidly. Yours, &c.,
THOMPSON, SMITH & SON.

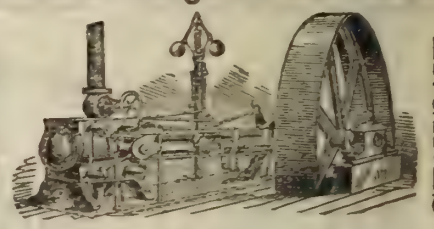


MILL MACHINERY!

I am also manufacturing Saw Mill Machinery, for all sizes of Gang or Circular Mills, Span or Double Circulars for Slabbing Small Logs. My Patent Jack Chain for drawing logs into Saw Mills, acknowledged by all to be the Cheapest and best ever got up; also, my Patent Lumber Markers, different sizes of Edgers, Gang Lath Mills, Trimmers, Power Gummers, and all Machinery used in a first class Gang or Circular Saw Mill; also, small Hand Gummers for use in the woods, for Cross-cut Saws. Rotary Pumps of different sizes, for Fire Protection in Mills, &c.

Horizontal Engines and Boilers

CORLISS ENGINES



Where economy of fuel is the great consideration, along with uniformity of speed, such as is required in Grist and Flouring Mills, Woollen and Cotton Factories, or large Factories of any kind, I supply the Corliss Engine. I feel justified in saying that our Style, Workmanship and Finish on this Engine will be no discredit to its renown, and certainly is not equalled in this country for economy of fuel. I have them working at 2½ pounds of coal per horse-power per hour. L10

WILLIAM HAMILTON,

PETERBOROUGH, ONT.

EMERY WHEELS FOR SAW GUMMING!

Solid Emery Wheels are now almost in universal use for the purpose of gulletting and gumming saws. Statistics show from 25,000 to 30,000 saw-mills in the United States. Many of these run only a single saw each. A one-saw mill would use one or two wheels a year, costing $3 to $4 each, and when such small mills order single Emery Wheels from the factory, the express charges often equal the cost of the wheel. There was a time when the quality of Emery Wheels was so uncertain, and the demand so fickle, that storekeepers could not afford to carry them in stock. Now, however, Saw Gumming Wheels have become as staple an article as Files, and every dealer in saws, Hardware and Mill Supplies can afford to carry a few dozen standard sizes in stock. Large dealers order stocks of $500 to $750 worth at a time. Saw Gumming Wheels are used with the edge (or face) square, round or beveled. Probably seven-eigths of all in use are beveled.

The principal sizes are:

8x¼, 8x⅜, 8x½ } ⅝ in. hole. 10x¼, 10x⅜, 10x½, 10x⅝ } ⅝ in. hole. 12x¼, 12x⅜, 12x½, 12x⅝, 12x¾, 12x⅞ } ⅝, ¾ and 1 inch. Holes.

Probably more wheels 12x⅜, 12x½ and 12x¾ are used than all the other sizes together. Saw Gumming Wheels are used, however, of all sizes up to 24x1½. The most frequent complaint is that Emery Wheels harden the saw so that a file won't touch it. The answer is that you don't want a file to touch it. An expert workman will shape and sharpen the teeth with an Emery Wheel, leaving the teeth *case hardened*, in which condition the saw will cut about 33⅓ per cent. more lumber than a soft saw will. Those who want to use the file, however, have only to touch the saw *lightly* a second time (after going all over it once), and this second touch will cut through the case-hardened scale.

A QUESTION OF QUALITY.

Thirteen years of experience as makers of, dealers in, and actual users of Emery Wheels, have led us to a decided opinion as to what quality is the best. We prefer for almost every use an "Extra Soft" wheel like the "Pocono." We believe that money lost through the rapid wear of the wheel is more than made up by the money saved on wages. As we cannot get every one to adopt our views, we make several qualities, so as to meet their views. We say to those who think they can only be satisfied with some other make of wheels (not Tanite), that we can furnish qualities *to match* any and every other make. If you have got used to some special quality of wheel, let us know what it is, and we can send you *a Tanite Wheel of similar quality*. Our *regular* classification of Saw Gumming Wheels is as follows:

CLASS 2. MEDIUM—HARD.—This Wheel is THE STANDARD Saw Gumming Wheel all over the world. Probably seven-eighths of all the Saw Gumming Wheels used are "Class 2." It cuts fast and keeps its shape well. Some think it too hard, some too soft. We prefer the "Pocono."

CLASS 3. MEDIUM—SOFT.—The same as to coarseness and fineness as "Class 2," but a *softer*, and therefor freer cutting wheel.

CLASS "POCONO." EXTRA SOFT.—This Wheel we prefer to all others. It is both *finer* in grain and softer than either of the above. As a Saw Gumming Wheel, Class "Pocono" is specially suited to those practical and experienced Sawyers who know how to grind with a light touch, and who want a free cutting wheel that will not create much heat.

Illustrated Circulars and Catalogue, showing Cuts of Saw Gumming Machines, and Shapes, Sizes and Prices of Wheels, sent free on application. L13

The Tanite Co. Stroudsburg, Monroe Co. Pennsylvania

CANADIAN TRADE SPECIALLY SOLICITED.

PUBLISHED SEMI-MONTHLY.

The only Newspaper devoted to the Lumber and Timber Industries published in Canada.

SUBSCRIPTION $2.00 PER ANNUM.

VOL. 1. PETERBOROUGH, ONT., OCTOBER 1, 1881. NO. 23.

A MR. BEACH is arranging to build paper and pulp mills at Eau Claire, Wis., the cost of which will be from $50,000 to $60,000.

IT is reported that a regular army of pine hunters are ransaking the north shore of Lake Superior and extending their limit as far west as the prairies in search of any odd groves of timber which Uncle Sam may have left.

EVERY Virginian over ten years of age is asked by the State Commissioner of Agriculture to celebrate the Yorktown centennial by planting a walnut or other tree, either in the yard, field, forest, or roadside. A sensible idea.—*Boston Post.*

JOHN MCGREGOR, of Midland, has closed a contract with C. H. Plummer, of Saginaw, for 320 acres of pine timber land on the Au Gres river, the consideration being $12,500. It is calculated that the tract will produce 5,000,000 feet of pine.

IN Sonoma county, Cal., a railway track crosses a deep ravine upon the upright trunks of the trees, which have been sawed off upon a horizontal line. In the centre of the ravine a firm support is furnished by two huge redwood trees, which have been cut off seventy-five feet above the ground.

AT Parishville, St. Lawrence county, N.Y., are the largest butter-tub factories in the Empire State. About 4,000,000 feet of lumber are worked up into tubs each year, the industry furnishing constant employment to one hundred and fifty men. The tubs are made mostly of spruce, brought down the St. Regis river from the Adirondack region during the spring freshets.

THE Quebec correspondent of the Montreal *Moniteur du Commerce* says that the transportation of square timber from the Upper Ottawa by the Q. M. O. & O. railway has succeeded perfectly. From the 20th to the 31st of August there arrived at Quebec by this route 116 cars containing about 1400 pieces. We congratulate the management of the company upon this result.

THE Menominee *Herald* says:—The Kirby-Carpenter company will have cut 65,000,000 feet of lumber by the close of navigation. The Ludington, Wells & Van Schaick company will show a scale of 50,000,000 feet of lumber, while the other mills on this side of the beautiful river will have increased their last year's cut. It is safe to place the cut of the Menominee mills at 155,000,000 feet.

THE works of Lyford & Tebbetts, at Locke's Mills, Me., turns out from 300 to 400 gross of spools a day. The material used is white birch, which is brought to the factory in large quantities by the farmers of the vicinity, and stacked and dried in the yard. Considerable birch is also brought from along the line of the Grand Trunk railway. The machine takes the sticks in the rough, and the spools roll out at the other end. The amount of birch manufactured into spools in this State is very large, the product finding sale largely in Connecticut at from seven to forty cents a gross, according to size.

THE *Timber Trades Journal*, of August 27th, says:—We were congratulating the trade last week on the return of the chartering market to its usual routine, in the employment of a preponderance of sailing tonnage, but this week again turns the scale heavily the other way. Of seventy-one ships arrived (timber laden) forty-five are steamers, and some of these bring 400 to 600 standards. If it is important that the deficiency of the spring supply should be made up all at once, this may be matter for satisfaction to the trade, but the market is less liable to be disturbed when the importation is more evenly distributed in sailing vessels.

A HARRISBURG paper calls attention to the maple and hemlock forests of Pennsylvania, and remarks that there has never been the right kind of enterprise to render those woods as important and useful as they merit. It is claimed that the maple wealth of the Keystone State is as great as that of black walnut once was, if properly handled, because the wood is hard and can be utilized to produce a beautiful effect in building and furniture. There is an enormous supply of maple in Pennsylvania, and it is predicted that sooner or later it will become one of the most profitable sources of industry in the State.

THE tolls of the Sturgeon Bay, Wis., ship canal this season will amount to $30,000, and it is stated that the company never expected more than $15,000 for any season. This favorable showing is made despite the fact that many masters go through the canal light, and return with their loads of lumber and other cargoes round by the bay and lake, fearing to pass through the canal on account of the low stage of water, which now has an average depth of only twelve feet. The work of deepening is going on, and it is anticipated that by October 15 the depth will be fourteen feet. The docking of the sides will soon be completed. When the work is fully accomplished and the greatest intended depth of water secured, the use of the canal will greatly augment, and the receipts for tolls must far exceed the most sanguine expectations of the projection.

The *Northwestern Lumberman* says:—The following report of the area of vacant lands in the upper peninsula, made to the State commissioner of Michigan, will be of interest to log and lumber operators. The number of acres is set down as follows:—Chippewa county, 292,600; Mackinac, 78,000; Schoolcraft, 137,500; Delta, 135,340; Marquette, 233,600; Menominee, 45,800; Baraga, 62,000; Houghton, 69,000; Keweenaw, 4,000; Ontonagon, 363,000; Isle Royale, 14,640—a total of 1,415,480 acres. The land in Chippewa, Mackinac, Schoolcraft, Baraga, Houghton, Keweenaw, Ontonagon and Isle Royale counties is all subject to private entry at $1.25 per acre, as are also 100,940 acres in Delta, 195,000 in Marquette, and 27,300 in Menominee counties. The balance of land in these counties—34,400 acres in Delta, 28,600 acres in Marquette, and 18,500 acres in Menominee counties—are subject to pre-emption and homestead entries only. The past year has witnessed an unprecedented demand for upper peninsula government lands, and should the sales continue at the same rate during the coming twelve months, the amount of Uncle Samuel's possessions in that part of the State will be lessened almost one-half.

Indian Foresters.

The *Lumberman's Gazette* says:—It is stated by the early settlers of southern Michigan that when they came the forests were so free of underbrush and sapplings that a wagon could be driven through the woods in any direction, which had the appearance of well kept groves. The reason given by the settlers for this condition of the forests was, that the annual fires which were promoted by the Indians, kept down the undergrowth and prevented the accumulation of debris. Whatever was the cause, it is certain that a change has taken place in the southern Michigan forests since the advent of the white settlers. The trees are denser and the saplings so thick that it would be unpleasant riding a horse through them, to say nothing of driving a team with a wagon attached. The moral of this matter would seem to be that if the Indians could keep the forests in such a condition that a fire running through them would do good and not evil, the smarter white man ought to be able to do as much. But a white man is not an Indian, and his time is taken up with something besides taking care of the woods. The forests supplied the wants of the Indians, and they had nothing else to do but give them such care as was necessary to promote their own safety and existence.

Southern Forests.

The New Orleans *Democrat*, in the course of an article on southern timber and its superior quality for manufacturing purposes, says:—They have been cutting timber in the counties and parishes along Mississippi sound for a century or so, yet the latest forestry report shows that in these counties from 75 to 98 per cent. of the area is wooded land. The greater portion of the State is forest, the timber being of the greatest variety—pine, ash, oak and cypress; while Mississippi, Florida and Arkansas are equally good fields for saw mills and lumber yards. New Orleans, indeed, is the centre of the largest section of the wooded lands in the Union, and will in time wrest from Chicago its claim to be the lumber capital of the country, and from Cincinnati the manufacture of furniture boxes, etc. In the many estimates of the wealth of the south this is something that has never been included. There will be a department especially devoted to southern woods at the Atlanta exhibition. Here, certainly, Louisiana ought to carry off the honor of making the best display.

Pine Land Sales.

The *Northwestern Lumberman* says that Cook & Dowling, of Montague, Mich., have recently sold about 20,000,000 feet of stumpage, on the line of the Chicago & West Michigan railroad, near East Golden, to W. H. Bigelow & Co., of Muskegon. The logs will all be taken to Muskegon to be sawed, and Messrs. Bigelow & Co. will begin cutting the timber at once. Mr. G. A. Wagar, a well known Michigan lumberman, has just bought 400 acres of what is known as "canal" land, in town 18–15, in connection with which transaction there appears to be something of a joke on a Chicago operator. The Canal Company's lands have been in the market for some years, but Mr. C. Mears, of this city, was supposed to own the only feasible outlet for the timber, in consequence of which it is asserted that he expected to absorb the land at his own figures, or thereabouts. Certain other gentlemen, with a propensity for gathering up timber land, have concluded that lumber is in sufficient demand to warrant bringing out the logs from this region by rail, and have quietly brought the most of it up.

Wanton Destruction.

The wanton destruction of timber goes on practically unchecked in the California Sierras. To say nothing of the inroads made upon Government lands by usurpation, for lumber traffic, vast quantities of valuable timber are annually destroyed by cattle men and careless and wanton campers. The former make a practice of setting fire to great pine trees for the purpose of thinning out the forests, thereby creating better cattle ranges, and the latter are quite as destructive without any special motive. The California *Commercial Herald* says: For months past great fires have been burning in the forests beyond Truckee, and scores of fires are now nightly seen throughout that region. The destruction caused by these fires is very great, and will be seriously felt in future years as the supply of lumber in the more accessible places becomes materially reduced.

MOTHERS do not drug your children with poisonous opiates, in the form of Soothing Syrups, when one bottle of Dr. Fowler's Extract of Wild Strawberry will allay all irritation of the stomach and bowels incident to teething. It is pleasant, mild, and harmless, and is a positive specific for every form of summer complaint. All dealers supply it at 37½ cents per bottle.

WHERE BIG TREES GROW.

SEATTLE, Wyoming, Aug. 15.—Few persons east of the continental divide know and appreciate the forests of this region and of Oregon and Washington Territories. In Eastern Washington and Oregon there are large tracts of timber lands as yet untouched, save for the demand for domestic uses, and which are awaiting the completion of the routes of transportation now in progress. In the Blue Mountains of Eastern Oregon, and in the Cascade Mountains along the Takina, Clearwater, and other streams in Eastern Washington, there is a sufficient quantity of timber to supply all local demands and leave a large surplus for shipment to the prairies of Montana, Idaho, Dakota, and other markets. But it is to Puget Sound that the lumberman of the future must look for the material with which to supply his mills. There is a district of country extending from the Columbia river north to and into British Columbia, and from the Pacific Ocean to the Cascade range, and surrounding the waters of Pugent Sound, which is almost entirely covered with one of the finest bodies of timber in the world. There one can see a whole forest of such tall, straight, gently tapering fir trees as would gladden the heart of a ship-master, and can travel scores of miles through gigantic lumber trees, ready for the logger's axe and saw.

The Sound district comprises a tract about 200 miles in length, with an average width of 100 miles. Estimating one-half the growth to be lumber trees, and to make 25,000 feet of lumber per acre, gives the approximate original amount of standing timber at 160,000,000,000 feet. Deducting from this the amount already cut, which is estimated at 2,500,000,000 feet, leaves now standing approximately 157,500,000,000 feet. The timber consists chiefly of pine, with considerable quantities of fir, spruce, cedar and redwood, and a small supply of white oak, hemlock and maple. The trees of this region show luxuriant growth. The yellow fir frequently attains a height of 250 feet; pine, 120 to 160 feet; silver fir, 150 feet; white cedar, 100 feet; white oak, 70 feet, and black spruce, 60 feet. Cedars have been found to measure 63 feet in girth, with a height of 120 feet. The pine trees are known to the lumbermen as of two varieties—"sap" and "overgrown." The "sap" tree yields 6000 to 8,000 feet of lumber, and the "over-"overgrown" 7,000 to 15,000 feet. Of this timber is made of all grades of lumber—ship timbers, fencing, pickets, railroad ties, barrel staves and headings, household furniture, &c.—and the product is shipped in large quantities to the Pacific coast of South America, the Sandwich Islands and Mexico, while some trade is done with Australia, France and England.

The first saw-mill on Puget Sound was a small water-power mill with capacity of about 1,000 feet of lumber daily. It was built in 1851, and was followed in 1853 by a steam mill erected at Seattle, with capacity for cutting 8,000 to 10,000 feet per day. Since this time the business has increased to more than 200,000,000 feet of lumber per annum. The following tabular statement shows the production of the Puget Sound district at different periods, in 1,000 feet, value and average price per 1,000 feet:—

Years.	Thousand Feet.	Value.	Average Price.
1855-56	10,287	$ 159,448	$15 50
1865-66	49,113	500,531	10 19
1877-78	154,078	1,474,526	9 57
1878-79	177,411	1,680,082	9 47
1880-81	209,542	1,969,694	9 40

It will be noticed that the price has steadily fallen, which is due to the increased number of mills, to competition, and to increased facilities for handling logs and lumber.

The export trade has rapidly increased, and from the best data obtainable is shown as follows:—

Years.	BOARDS, DEALS, JOISTS, &c. Thousand Feet.	Value.	LATH, PALINGS, PICKETS, &c. Value.	Total Value.
1855-56	2,286	$ 35,448	.....	$ 35,448
1856-57	4,320	64,800	$ 445	69,245
1865-66	10,914	111,196	.....	111,196
1868-69	19,314	183,483	5,505	188,988
1877-78	34,532	330,800	.....	330,800
1878-79	36,236	343,491	18,307	361,798
1880-81	40,136	377,278	25,802	403,080

The mills of the Sound are some fifteen in number, and they are most desirably situated for economical production. Some of them form towns in themselves, with dwellings, stores, shops, steam tugs, and lumber vessels, all owned by the companies. The largest, situated at Port Ludlow, has a daily capacity of 225,000 feet. Following is a list of the mills, with the daily cutting capacity of each:—

	Feet.
Port Gamble	200,000
Port Ludlow	225,000
Port Madison	100,000
Port Blakely	100,000
Port Discovery	70,000
Seabeck	80,000
Utsalady	75,000
Tacoma and New Tacoma	102,000
Seattle (Six Mills)	150,000
Total	1,102,000

The custom at nearly all the mills is to await the receipt of an order and saw the lumber to fill it, and one can frequently see a fleet of half a dozen or more vessels loading at once with lumber fresh from the saws of these mammoth mills. Shipbuilding is an industry of considerable importance on the sound in connection with the lumber interest, as nearly all the vessels engaged in the trade are built here of native timber. The first vessel built on the sound was a sloop of 14.68 tons, in 1858. From that time the number has increased yearly, with 12 vessels built in 1864, aggregating 753.30 tons; 19 vessels in 1869, 1,952.10 tons; 14 vessels in 1879, 965.99 tons. The whole number built since 1858 is 162, with a total of 20,083.28 tons.

The day seems not far distant when the western half of the American continent, at least, will look to Puget Sound for its entire lumber supply, and with the completion of the routes of transportation projected and in course of construction, lumber can be furnished to points as far east as the Mississippi river at less cost than from the Atlantic sea-board.

The waters of the Sound are recognized as the finest harbor in the world, and fleets of lumber vessels, tug-boats towing logs, and steamships plying between the various ports, carrying passengers, mails, and freight are seen on all sides. There are many desirable localities for the establishment of factories for the manufacture of barrels, pails and tubs, and of house trimmings, such as doors, sash, blinds, mouldings, &c.

At Seattle, the most important town on the sound, a large barrel factory has been for some time in successful operation, the lumber used being a very fine quality of cypress. Also at Seattle are six saw mills, besides several mills for dressing lumber and for the manufacture of builders' trimmings. Nearly all the vessels engaged in the lumber trade, as well as some of those employed in the coal trade, from Seattle to San Francisco, are made here. All the wood used in their construction from false-keel to topmast is pine of the various kinds, cut, sawed, shaped and put in place in some instances within a distance of half a mile. One sees on the sound craft of all sizes, from the row-boat to a schooner of 400 tons, built entirely of native lumber, and within such easy distance of the forest that their construction must of necessity be economical. The time is coming when one of the greatest and most profitable industries of Washington Territory will be the building of ships upon the shores of her beautiful and land-locked harbor.

Everything here seems to favor the lumberman. He has no severe winter weather to contend with. The forest reaches to the shores of the sound, which are not abrupt or precipitous, but incline gradually to the water. Numerous streams flow into the Sound, the waters of which have no current except such as is caused by the action of the tide, and logs are easily towed to any point. Thus is avoided the delay, dangers and expense of a severe winter season spent in the woods, and the "driving" down rapid and swollen streams during the spring rise, and with no danger of a sudden rise breaking a "boom" and scattering the labor of months.

In this description the heart only of the lumber country has been taken. To the north it extends into the British possessions, although after passing Frazier river the growth is not so good. Taking into consideration the vast quantity of material, the excellence of harbor, and the economy with which mills, factories and hip-yards can be supplied, it is no wonder that Puget Sound is called the future great lumber treasury of the United States.—*N. Y. Times.*

Sale of Timber Limits.

OTTAWA, Sept. 20.—The announcement of extensive sales of timber limits on private account brought together a large assembly of lumbermen at the Grand Union Hotel this afternoon. The following limits were disposed of:—The R. C. Campbell limit on the Front Lake branch of the Petewawa river, 39 square miles, sold to Wm. Moore, of Tarbolton, *en bloc*, for $29,500; Fraser & McDougall limit, berths 164 and 169 on Big Lake, River Des Moines, Quebec, 100 square miles, sold to W. G. Perley, Ottawa, for $90,000; Frazer & McDougall limit, berths 165 and 168, 100 square miles, to Alex. Fraser, Westmeath, $59,000; Fraser & McDougall limit, berth 167, 50 square miles, to E. B. Eddy, $15,500; berth 4, Deep river, 14½ square miles, to E. Moore, $4,200. The following were offered, but not sold:—Sir Francis Hinck's limit, 50 square miles, between the Coulonge and the Des Moines rivers, $110 per mile bid, limit withdrawn; Brannen limit, so-called, offered on account of Mr. McMaster, Toronto, being berth No. 4, Kippewa, 50 square miles, $485 per square mile bid, withdrawn; berths 23, 53 and 51, Nipissing, 26 square miles each, were withdrawn, notwithstanding bids of $75,000 for the three and $50,000 for one berth. The Nipissing limit, berth 168, was offered and withdrawn. Several limits were offered for sale by Mr. Brewer, auctioneer, alternately with Mr. Tackaberry, but after spirited bidding they were withdrawn. The prices realized and offered were good.

The following limits were disposed of by Mr. Tackaberry in addition to those above mentioned: Fraser & McDougall limits, berths 164 and 169, to Perley & Pattee, for $90,000; berths 165 and 168, 100 square miles, and berth 166, 50 square miles, to A. Fraser, for $59,000 and $36,000 respectively; berth 167, 50 square miles, to E. B. Eddy, for $14,000. Deep river limit, berth 4, 14½ square miles, to E. Moher, for $4,200. Buck and Stewart limits, 13½ square miles, to Perley and Pattee, for $3,700. The following limits were offered for sale, but were withdrawn owing to the bidding not being sufficiently high: Brannan limit, on the Kippewa, fifty square miles, $495 per mile, offered and refused. Lake Nipissing limits, berths 23, 43 and 51. 108 square miles, $75,000 offered for the lot, and $50,000 for berth 23 and refused. Mattawa limit, license 168, sixty square miles. Kippewa limit, berth 63, 50 square miles. Mr. Brewer also offered for sale several limits, but as they did not bring the reserve price, they were withdrawn.

American Poles in England.

In the House of Commons, recently, one of the members asked the Postmaster-General whether it is a fact that the Post Office Department uses foreign timber only for telegraph posts, whereas many railway companies use home-grown timber for that purpose; and, if so, whether he will cause inquiry to be made as to the relative price and value of home-grown and foreign timber in different portions of the United Kingdom, with a view to directing the use of home-grown timber where such a course can be adopted with advantage or without prejudice to the public service. Mr. Fawcett replied that the telegraph poles were of foreign timber, and he found that foreign timber was also used by the railway companies for similar purposes. The reason why foreign timber was preferred was the greater durability arising out of what was known as the creosote process, which made it last much longer than home-grown timber.—*Northwestern Lumberman.*

THE *Evart Review* thinks every man in the country is fortunate who is the owner of hemlock land. For both timber, manufactured lumber and tanbark, the hemlock is growing rapidly into favor in all the great lumber markets abroad. Every man who is the owner of a good piece of hemlock land should not part with it at anything like present prices. It is a good investment, in fact, one of the best that any man can make in the way of buying timber land.

THEY ALL DO IT.—Everybody uses "TEABERRY" for the teeth and breath, the newest, brightest, coziest little toilet gem extant. Try a 5 cent sample.

THE ENGLISH TRADE.

The London *Timber Trades Journal* says:—The aspect of the timber trade may be said to be quite as favorable at the present time as that of most others. There is no expectation of any considerable rise in prices, nor any apprehension of a serious fall. Some importers will find themselves shorter of stock at the end of the season than they would desire, while others will wish they had not bought quite so freely. But as a rule the trade will probably be fairly well supplied, and they are likely to get a fair remunerative profit on the business they do. There is a short importation of Russian stock up to date, amounting to about a third part of the whole shortage of import compared with last year, yet there is no want of Russian deals exhibited by the prices they fetch at the public sales, which seldom exceed the cost of importation; and as the deficiency will no doubt be partly made up before the season closes, it is not likely that better prices than those now current will be obtained for deals from that region.

Our record of imports this week contains the arrival of upwards of 770 cargoes of wood. In London alone one hundred and thirty-six timber laden vessels arriving within the compass of a week's return surpasses all that we have hitherto had to record during the present or any other year in that way. But the great preponderance as to numbers is with sailing ships, as not one-third of them are steamers this time. Russia and Russian Finland are now pressing forward the arrears of the spring shipments, nor are Sweden and Norway slow to avail themselves of every occasion to get goods forward to this country while the season is inviting. A few more such weeks and the shortage as compared with last year may melt into insignificance. This sudden supply is extraordinary.

The Land Rage in Winnipeg.

The first thing that strikes the visitor before he has been six hours in Winnipeg is the tremendous rage going on for speculation in land. This rage is almost equal to the gold or diamond fevers, and though the prospects of the city are at present good, it is feared they may be injured by the speculations which are going on, and which are very cleverly manipulated by designing speculators. Large sums of money are being made, and one man, by no means one of the largest speculators, has without doubt realized $20,000 since the spring. Go where you will there is nothing but land talked, and if you cannot talk land you had better "step down and out," for people will think you a fool. Knots cluster around the hotels and in every public place, and with all the one absorbing topic is—Land! Auction sales go on every evening, and lots are sold not only in Winnipeg, but all over the country. People rush in and buy lots that they know no more about than the man in the moon, and the following bears this out:—At a sale of lots recently, a little boy between 13 and 14 edged his way through the crowd, and going up to a gentleman interested in land, who by the way is brother of the worthy Sheriff of York, pointed out to him on a map two lots, and asked if they were good ones. The gentleman said yes, and asked why he wanted to know. "Well," said the boy, "I've saved $25 round the hotel, and I'm going to invest it in land, and I thought I'd pay so much on these, and sell them as soon as there was a rise." The gentleman showed him some lots which he thought he could do better with, and the boy departed to think over the matter.—*Globe Cor.*

Worthless Stuff.

Not so fast my friend; if you could see the strong, healthy, blooming men, women and children that have been raised from beds of sickness, suffering and almost death by the use of Hop Bitters, you would say "Glorious and invaluable remedy."—*Philadelphia Times.*

NOW THAT THE TRAVELLING SEASON IS AT HAND, no traveller should be without a bottle of Dr. Fowler's Extract of Wild Strawberry, to counteract the bad effects of the change of climate, water, and diet; fruitful sources of bowel complaints. Wild Strawberry is a specific for sea sickness, nausea, vomiting, colic, cholera morbus, diarrhœa and dysentery. Contains no opiates, is pleasant to the taste, and certain in its affects. 35 cents per bottle. Ask your druggist for it.

NO TRUTH IS CLEARER than that Scriptural declaration:—"The blood is life, * * * and the leaves shall be for the healing of the Nations." Burdock Blood Bitters is purely vegetable, and makes pure blood, renovates, invigorates, and restores the system when impoverished by disease. One bottle, at the nominal cost of one dollar, will convince the most sceptical of these assertions.

BOILER EXPLOSION.

SAD RESULT FROM A DEFECTIVE GAUGE OR CARELESSNESS OF STEAM.

BELLEVILLE, Sept. 24.—A shocking thrashing machine accident occurred in Thurlow yesterday afternoon. A local paper publishes the following particulars:—

One of the most terrible and fatal accidents that ever occurred in this vicinity took place yesterday afternoon between 6 and 7 o'clock, at the farm of Mr. George Caldwell, eighth con. of Thurlow, and about one and a half miles east of Zirous Hills. Mr. Owen Reeds steam thresher had been engaged during the day by Mr. Caldwell, and through some defect of the gauge or carelessness on the part of the engineer the head of steam carried was not fully known. The consequence was that the boiler of the thresher exploded with terrific force, tearing everything into pieces and scattering death and destruction on all sides. Inson, thresher, who was engaged near the cylinder at the time the explosion occurred, was struck by pieces of the shattered engine, and his skull was badly crushed. He died almost instantly. Andrew Lloyd, who was also near by, was blown fully twenty-five yards from the engine, and his abdomen was torn open so that his bowels protruded. Death was almost instantaneous in his case. Also Wm. Malcolm, son of Mr. Wm. Malcolm of this city, and who was formerly foreman of the gas house here, was instantly killed. He was employed on the machine and was a promising young man of about twenty years. Miss Viola Caldwell, daughter of Geo. Caldwell, aged eleven, who was near the machine watching the operations, was struck by a piece of the engine and her neck broken. She, too, died in a few moments. But these casualities, horrible as they are, did not complete the injuries inflicted upon life and limb. Mr. Caldwell was seriously, but not fatally wounded. Henry Garvin was dangerously injured, and may die. C. Gerkin was also painfully injured. The engine was shattered into a hundred pieces, and part of it was driven into the barn, setting fire to the straw. By great efforts the flames were extinguished before it had done much damage. The scene at the barn after the accident baffles description. The writer got his information from an eyewitness who describes the anguish of the bereaved friends as heartrending in the extreme. While some cared for the wounded, others gathered about the mutilated forms of the killed and rent the air with their cries. Strong, active men, who, a few moments ago were exchanging greetings and anticipated nothing but happiness, lay upon the ground bleeding and dead. The little girl Viola was not mutilated, and her death was so sudden that her countenance retained a natural expression in death. All around were broken and splintered parts of the engine. The shades of night closed over one of the saddest and crushing scenes ever witnessed in this part of Canada. Mr. Geo. Caldwell, who suffers such a terrible loss by this accident, is a brother of Dr. Caldwell dentist, of this city, and is a widower of about 48 years. He owns a farm of 200 acres, and is a prosperous farmer. His mother resides with him.

LATER.—Further particulars of the threshing machine disaster show that Mr Caldwell was not injured, and that it was not his daughter, but her cousin Viola or "Lotia," who was killed. The two children were sitting with arms intertwined when the explosion took place. A portion of the boiler struck Lotie, killing her instantly, and Helen was severely scalded. The little one who was killed was a daughter of David Caldwell, a brother of George. The body of Andrew Lloyd was thrown 192 paces, and that of Malcolm nearly as far. Gavan, who was injured, is already able to be about, but it is feared that Helen Caldwell will die, as she inhaled a quanity ot steam. Inson, the thresher, was thirty-two years of age and had three children. He lived in Thurlow. Lloyd was about twenty-five years of age, unmarried, and lived in the village of Plainfield. Malcolm was about twenty years old, and lived in Belleville. Large peices of the boiler were blown into fields adjoining, and were picked up at distances from 200 to 300 yards from the scene of the accident.

BUSH FIRES.

The following extract from an essay on Forestry by Bucke Withan, of Ottawa, is of interest and value at the present time: "The enormous waste from bush fires is quite incredible to those who have not witnessed their devastation. These originate through careless settlers and hunters, who camp in the woods, and sometimes, though rarely, by the lumbermen themselves, or by surveyors who make smudges to ward off the attacks of flies and mosquitoes. These fires started during a dry season are stopped only by large streams, lakes, swamps, or by heavy continuous rains. The fires leave a barren waste, and are only replaced by a scrub growth of birch or popular. Stringent laws have been passed by the Ontario Government against orginators of fires, but unfortunately no sufficient machinery has been created to put these laws in force, though petitions have from time to time been forwarded to the Government by the millowners and the lumbermen. It is estimated that more timber has been destroyed by bush fires than has been exported althogether from the country. It is evident that if these fires could be suppressed and the young trees which are left on the pine lands after the large timber has been cut out could be protected and allowed to grow up, a valuable forest would be formed for a continuous supply if to this were added some systematic scheme by the Government for planting on its waste lands, it is not yet too late to recuperate the pine timber forests of this country. To further the proposed undertaking it would be well to import a few practical foresters, in order that their wisdom, acquired by the old, might be utilized in the new world. The increase in the revenue derived from the Crown lands dues by the Government could be profitably expended in protecting and fostering the timber interests on the public domain. The staff of twenty or thirty rangers at present employed by the Government have done inestimable service, but it is obviously impossible for such a small staff of but partly employed men to ascertain the origin of destructive conflagrations. The writer would therefore suggest that the Government appoint permanently the required number of wood rangers or inspectors, that one or more constables be employed for every limit of 100 miles square." Whose duty should it be to apprehend and report to the ranger or other officer any case of violation of Crown timber regulations, especially with regard to fires. At present the regulations are very good, but there is no one specially to enforce them, saving the few rangers referred to. Mr. Hotchkiss, who compiled the timber article for the United States census, states that at the present rate of cutting the Canadian supply of timber will give out about the same time as that of the United States, that is, in about thirty or forty years. Hence the timber trade of the continent will thence be transferred to the Pacific slope. One of the largest millowners on the Ottawa informed the speaker that he thinks there will not be any pine for exportation from Canada twenty years hence. Should this Province, therefore, wish to retain her timber interests there must be no delay in dealing with the question.

The circulation of the blood has been demonstrated by the microscope, and the proof of the circulation of Esterbrook's Pens is that they are found everywhere.

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AUCTION SALE
Twenty-one Hundred Acres
OF VALUABLE
CEDAR & PINE LANDS
Will be offered for sale by Public Auction, at Noon,
On Friday, 28th of Oct. Next
AT THE COURT HOUSE, IN THE
Town of Lindsay
Being Nine Hundred Acres in the Township of Somerville; and Six Hundred Acres in the Township of Fenelon; and Six Hundred Acres in the Township of Bexley.
Dated 24th September, 1881.
DENNISTOUN BROS. & HALL,
2L23 Solicitors, Peterborough.

AUCTION SALE
OF VALUABLE
Timber Limits
Situated near Lake Nipissing.
Notice is hereby given that (if not previously disposed of by private bargain) the following Valuable Timber Limits will be offered for sale at Public Auction at The Mart, 57 King St. East, in the CITY OF TORONTO, on
Wednesday, 5th of Oct. Next
AT THE HOUR OF NOON, VIZ.:

	Sq. Miles.
Berth No. 23, on the River Bueve, near Lake Nipissing, comprising	36
Berth No. 43, on the River Wannapitac, near Lake Nipissing, comprising	36
Berth No. 51, on the River Wannapitac, near Lake Nipissing, comprising	36
In all	108

These limits contain, in the aggregate, a large quantity of magnificent pine timber.
Berth No. 23 is estimated—as the result of a recent exploration—to contain a quantity of trees sufficient to produce at least half a million cubic feet of square timber, besides two hundred and fifty thousand standard saw logs. The river is available for driving to Lake Nipissing.
There is a good mill site on the Bueve river, about three miles from Lake Nipissing.
Lumber could be transferred thence by water to the Callender station of the Canada Central Railway, the line of which is projected to pass directly through this limit.
The owners reserve the right to dispose of either or all of them by private bargain in the meantime, and will be ready to consider any offers that may be made.
Persons desiring further particulars are invited to communicate with the undersigned.
F. W. COATE & Co. Auctioneers. SMITH, SMITH & RAE, Solicitors, Toronto.
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BURDOCK BLOOD BITTERS
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Sample Bottles 10c; Regular size $1.
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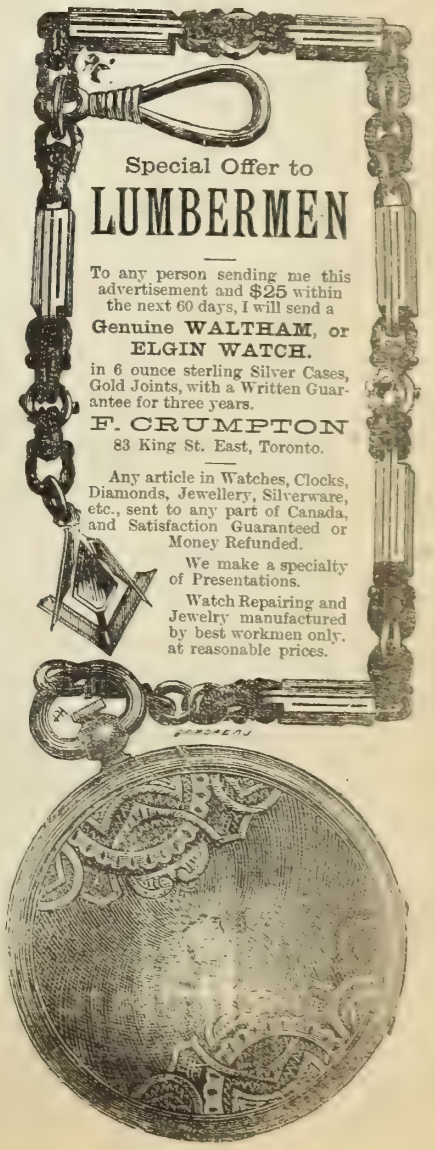

THE CANOE ISLANDS.

They are found only on the latest local map of Lake George, these isles of the blest—that is to say of the American Canoe Association. Some five miles northward from Crosbyside they rest; three of them—blue in the haze, green in the sunshine on the waters of the most enchanting of American lakes. The second week of August saw them the centre of the canoeing interest. Thitherward under sail and paddle came sun-browned, blue-shirted ones, from as far west as Wisconsin, and as far east as Maine. Most of them had been some days or weeks on the way, taking their vacations in the open air; cruising in their canoes by day, and sleeping in them or in tents beside them by night. There were clergymen, lawyers, doctors, journalists, manufacturers, foundrymen, merchants, students and all the other trades and professions; for the A. C. A. is eminently Catholic in its scope, and says "no" to a candidate for admission to its ranks only on the most obviously objectionable grounds.

Gradually the main island assumed the appearance of a considerable camp, while the second in size was appropriated by the Cincinnati club, which sent the largest single delegation, and was in itself the centre of a life and enthusiasm that were unknown upon the main island.

Among the most notable of the arrivals early in the week was that of the Canadian contingent, hailing from Peterborough and Ottawa. They arrived in the midst of a heavy blow from the northward, the sea running quite high and the lake covered with whitecaps. The Canadians use the open hunting canoe, built on the general lines of the aboriginal "birch," but beautifully finished in bass, cedar and other woods, and polished like highly finished cabinet-work. The voyageurs had come down the Dominion rivers and Lake Champlain, bringing their camp equipage with them, and in the eyes of canoeists from lower latitudes the dainty craft were weighed down perilously low in the water. It seemed like harnessing a high-spirited racer to a lumber wagon, this loading a light and graceful creature with five or six times its weight of men and material. On they came, however, rising cork-like over the seas, the long-bladed paddles flashing, and lithe, muscular forms of the Canadians bending to the work as it became necessary to veer to one side or the other in order to avoid an unusually threatening series of waves. Presently they swept round into the lee of the island, saluted gracefully with their paddles in answer to the cheers from the shore, then landed, and in an hour or so had their tents pitched, and the Union Jack of England flying at their landing.

These Canadians carry home with them the hearty admiration of their American brethren. With two centuries of canoeing behind them they came down to Lake George as modestly as if they expected to learn something from us neophytes; and when the leader, Mr. Edwards, of Peterborough, was unanimously chosen Vice Commodore of the association for the ensuing year, he actually protested against it as too great an honor.

Wednesday was announced by the local press and on the hotel bulletins as "ladies' day," and the camps and canoes were prepared for inspection. The canoes, with all sail set, were taken out of water and arranged in line along the main path of the island, everything being ship-shape and man-o'-war fashion so far as practicable. By the middle of the forenoon visitors began to arrive with their escorts from the various hotels on the mainland, and presently the wooded island was gay with bright dresses and parasols, which went from boat to boat and from tent to tent, full of interested curiosity about every detail of camp life. The ingenious contrivances in the way of portable stoves, compact cooking-kits, and all the appliances to which canoeists resort to increase comfort while taking up but little room, were fully explained.

Thursday, the opening day of the races, saw the prettiest sight of the week. The wind was favorable, and nearly half a hundred fairy craft ran down to Crosbyside under sail. Every style of rig, standing, balance and Chinese lugs, lateens like those of the Italian felucca, leg-o'muttons, plain boom, gaff and sprit sails, all were filled by the northerly breeze, and the lower reaches of the lake were thickly sprinkled with white sails and the flashing blades of paddles. One upset occurred, successfully and safely performed by a member of the New York club, who subsequently distinguished himself by winning every sailing race in which he started, and presently all hands were at Crosbyside making ready to participate in the three days' regattas which followed.

Of these I will say nothing save that, as was appropriate, a Western son of Anak carried off the two principal prizes assigned for the muscular paddle, while salt-water seamanship secured the two which were assigned for the sailing races.

The ceremonies ended on Saturday night with a supper tendered by Mr. Crosby, of the Crosbyside Hotel, and on Monday the canoeists departed for their respective homes, or for the conclusion of cruises interrupted by the programme of regatta week.

The Association may now be regarded as an accomplished fact. Its membership is about 150, and its composition is as unexceptional, its purposes as healthful and health-giving as can readily be in any such organization. Sporting characters, in the objectionable sense of the term, are unknown upon its rolls, and it seems destined to fufill its mission of developing a spirit of good fellowship and camaraderie which can hardly be attained in like degree by any other athletic association in the land. The secretary is M. C. A. Neide, Slingerlands, N.Y.

Of the recreation in its general aspects a word may perhaps be appropriately said in conclusion. The term does not properly describe the craft, and indeed the pundits of the guild are puzzled to find a terse definition of the word. The aboriginal canoe, "birch" or Kayac with its paddle is perhaps the purest type, but modern ingenuity turns out a boat which is in all essentials a little yacht. It is fitted with sails, lockers, water-tight life-saving compartments, is decked over, affords comfortable sleeping accommodations for its crew of one, and is in all respects a safe and convenient vessel in which to cruise on lakes and rivers, and along the sea coast. Long and in some cases adventurous voyages have been made with its aid, and the accidents have been remarkably few. The whole life of the canoeist indeed teaches self-reliance and readiness under all circumstances to act promptly and with judgment.

Eternal vigilance is the price of dry flannels in a canoe cruise, and readiness of resource is a characteristic of the canoeist as it is of the sailor. No out-of-door sport that is worthy the name is without its dangers, and anything that will within reasonable bounds foster a spirit of healthful adventure must tend to develop a finer quality in the manhood of the race. Base ball, cricket, rowing, tennis and the other stock of out-of-door gymnastics have their times and seasons, but the canoe takes rank in some respects—in many, as its disciples believe—above them all. It brings its devetee nearer to nature, and opens to him possibilities of pure and genuine recreation such as none of the others can afford.—*By Charles Ledyard Norton, in the Christian Union.*

The Timber Used For Matches.

Five hundred and fifty-five thousand hours of each successive day are spent in by the inhabitants of Europe in striking lucifer matches upon the box and otherwise. The computation is based upon the following curious statistics:—Europe, continental and insular, consumes two milliards of matches daily. Assuming that each several act of ignition occupies the brief period of one second—and we have reason to believe that it is rarely performed in a shorter time—it will be obvious to every ready reckoner that the above mentioned amazing number of hours must be diurnally devoted to the production of artificial light by friction, in our quarter of the globe alone. This is food for much quaint speculation in the seemingly anomalous fact that Europeans dispose of nearly sixty-four per diem in scraping tiny sticks, tipped with some inflammable composition, upon sympathetic substances of various descriptions. It is also interesting to learn that four hundred thousand cubic yards of timber and four hundred and twenty thousand pounds weight of phosphorus are in annual request for the manufacture of the seven hundred and thirty thousand millions of matches used up by Europe in the course of every year.

DRY ROT IN TIMBER.

This disease, if it may be so termed, is still a matter of doubt between naturalists who have sought to explain the production of the fungi. Some have maintained that the fungi producing dry rot are spontaneously developed; others that they are produced by seed taken up and supported in the air, until favorable conditions are presented. The fine powder which distinguishes dry rot is composed of myriads of reproductive spores of the fungus. From a mildew it assumes a delicate, white vegetation, and afterwards a leathery appearance. The fungi, over different materials, are of various colors, sometimes reddish, violet, brown, at others white or gray. It is well known that very damp situations are not favorable to the growth of the fungus. In dry situations it is found to spread more rapidly, and we have seen the sides of a party-wall covered with its fibrous, cotton-like texture, the roots or filaments appearing to have extended from the basement. In this case the painting of the wall was in a pulverizing state, and the skirting and flooring covered by it. The situation was quite dry. Absolute wet prevents its growth, but damp combined with warmth appears to be favorable to decay. One of the principal naval builders of the Chatham, Eng., dockyard has said that the destruction of timber by dry rot cannot take place unless air, moisture and heat are all present, and that the entire exclusion of any of these three stays the mischief. Mr. Britton, in his work on "Dry Rot," who quotes this opinion, observes, "The admission of air has long been considered the only means of destroying the fungus, but as this has frequently proved ineffectual, it must not be always taken as a certain remedy." He also says the air admitted ought to be dry air, so as to absorb the moisture; it will then exhaust the fungus. But care should be taken to let the air escape, and not allow it to convey the seeds of the disease to other parts of the building. Hence, the value of free ventilation behind all skirtings, dados, wainscotting and floors in the first place. At eighty degrees Fahrenheit dry rot proceeds rapidly, but at from 100° to 120° it is arrested. At low temperatures it is also arrested. To prevent rot good seasoning and ventilation are essential. Charring after seasoning and coal-tar are recommended. To cure dry rot a solution of corrosive sublimate in water, an ounce to a gallon, used hot, or a solution of sulphate of copper, half a pound to a gallon of water, used hot, are good washes.—*Northwestern Lumberman.*

To Make a Frame House Cool.

The New York *Tribune* in a recent issue recommends the following method for rendering an ordinary frame house dry, warm and cool:—"These conditions are obtained by the introduction of a mortar or concrete wall between the upright timbers or 'studding' of the ordinary balloon frame. The wall is very cheaply made, the mortar being simply filled in between boards loosely nailed on, and as soon as the first or lower filling has set, the boards are taken off and nailed on higher up, and the space again filled. In this way, the filling process and removal of the boards being repeated as often as necessary, the wall may be carried up as high as desired, whether to the roof, or only to the top of the first storey, but the full height of the studding is best. The plaster may be put directly upon the interior surface of this wall, which of course will be of the same thickness as the width of the studding timbers, usually four inches, and will be flush with them on both sides. But to prevent the dampness which a solid wall without an interior air-space would be sure to produce, strips of lath must be nailed up and down on the outside of the house, and the siding nailed to and through these strips. There will now remain, when the siding is put on, a space of about one-third of an inch between the siding and the wall. This is not sufficient for a harbor for rats and mice, while it is quite enough to insure the retention of its warmth by the wall during the winter night, at least in a sufficient degree to prevent frost. On the other hand, the heated condition of the outer surface of the siding in summer will not be readily transmitted through the non-conducting material of the wall, which will therefore maintain nearly the same temperature day and night at all seasons."

MORE BUSH FIRES.

A REPITION OF THE LATE SCENES IN MICHIGAN —SERIOUS CONELAGRATION.

CARTHAGE, N.Y., Sept. 17.—The forest fires which broke out on Thursday a few miles south have been increasing ever since. Yesterday the wind blew a gale, and the fire spread so rapidly that many farmers were unable to remove their crops and stock, which with many buildings were burned. Hundreds of people have been employed for the past twenty four hours in removing their household goods and farming implements to places of safety. The people of this village responded to calls for help to fight the fire until the streets were deserted. Three men named Kelly, Getman and Flood went into the woods yesterday morning, and have not since been heard from. It is said that twenty houses in the Irish settlement were burned since Thursday night. The grass and seed burn like tinder, and the fire spreads with incredible rapidity if the wind blows. The fire is at present approaching the cemetery through a swamp, and the people are preparing to save it if possible. There are no signs of rain.

Big Thing.

American journals have heretofore enjoyed the satisfaction of getting up the most monstrous and absurd things capable of being reduced to print, but they are fast losing ground and Europe is coming to the front. The last number of the *Journal of Forestry*, London, Eng., contains a most remarkable article translated from the *La Gaceta de la Indastria*, of Spain; it reports:—"The Americans are projecting a work exceeding in magnitude any which have hitherto been dreamed of. They propose to unite America to Europe by a railway tunnel along the bottom of the Atlantic Ocean. The tunnel will be formed of an iron tube 5,600 kilometers in length and 8 metres in diameter. To enable it to resist the pressure to which it will be subjected, the tube is to be 50 centimetres thick and in sections 50 metres in length. Detailed information is given in regard to the proposed operations of construction at the bottom of the ocean, with notices of the arrangements for securing telegraphic communication, electric light and ventilation. Mr. Edison, who is one of the commission of engineers to which the project has been submitted, has given assurance that by means of an electric locomotive of his invention the distance of 5,600 kilometres may be travelled in fifty hours, and the colossal undertaking, inclusive of rolling stock, is not to cost more than 2,000 millions of francs." The *Gaceta* gives also a summary of a projected extension of the Moscow and Novogorod railway by Orenburg and the river Ural to Orish, the European terminus end starting point of the Asiatic line toward Tashkent-Kohlau, through desert regions requiring the construction of numerous bridges, cuttings, tunnels and workshops of corresponding magnitude, the final terminus being Pekin. It is spoken of as being beyond doubt one of the greatest undertakings of which human activity can conceive.

Blaze in a Lumber Yard.

BARRIE, Sept. 15.—The lumber in Mayor Ardagh's mill-yard, situated on the bay shore half way between here and Allandale, was discovered on fire about noon to-day, and the alarm quickly sounded, but on account of the extremely high wind blowing at the time, the flames had made considerable headway before the fire engine got over. The Northern Railway Company also sent their engine and a large number of men from Allandale to the firemen's assistance. They fought the battle well, and succeeded in keeping the fire within the lumber yard, although the mill and many of the surrounding houses had a narrow escape. The loss on lumber is estimated at from $7,000 to $8,000. On account of the absence of Mr. Ardagh in Toronto, it cannot be ascertained whether the lumber was insured or not. The origin of the fire is not known, but is supposed to have been caused by a spark from the mill or a passing train.

Were man to conform *more* to the laws of health and of nature, and be less addicted to the gratification of his passions, it would not be necessary to advertise Fellows' Compound Syrup of Hypophosphites as a restorative for the power of the brain and nervous system, while the world's progress enlightenment would indeed be marvellous.

FOREST CULTURE ON THE PRAIRIES.

In a thickly-wooded country it is natural that settlers should turn their chief efforts to getting rid of the timber. Only a very small portion of it can be utilized for building and fences; the rest is valuable only for the potash it will produce. This is true of the early settlements. After a while the merchantable timber, the black walnut, where it happens to grow, the pine, the oak, the bird's-eye maple, are worth marketing. At a further stage, such as that which the State of New York has now reached, almost all kinds of hardwood are valuable, not only to produce heat, but for use in manufactures. In a country where the prairies are out of all proportion to the woodlands, large, the necessities are of an opposite kind; instead of tree destruction, which is the law of progress in forest lands, tree planting is a necessity. But there is, nevertheless, a natural reluctance to engage in it. To plant in autumn or spring a crop that will be reaped in the coming summer is what most strongly recommends itself to the farmer. To plant and reap in a few months is the sort of alternation that suits him best. To plant trees which may be years in arriving at maturity, which the planter may never live to see fit for use or the market, offers a too remote chance of compensation for the labor and patience expended, to make planting trees an alluring enterprise. And besides tree growing, which consumes a number of years, raises a question of capital. If a farmer has no capital which he can afford to invest without the hope of a return for a number of years, he cannot go into forest culture, even with a strong inclination to do so.

In such a state of things, forest culture needs special encouragement. Bounties and freedom from taxes have both been tried in the western States. In some cases a fixed sum has been paid for every tree planted; but the temptation to fraud which the premium held out sometimes proved too strong to be resisted. This plan, judged by its results, can scarcely be recommended for adoption. The freeing of timber-planted land from taxes is said to have answered better; but if frauds can be perpetrated under one form of bonus, it is difficult to see why the same evil may not happen under the other. To be sure, a tree planted in the spring might have its absence explained some months after, on the plea that it was dead. Taxes are payable every year, and they would not be likely to be remitted on land which the assessors did not find devoted to forestry. There is, therefore, a reason for preferring the remission of the tax. Whether the remission of the municipal tax, where there is no other, would prove sufficient, is a question. It is clear that though the remission of state and municipal taxes might achieve the object desired, the remission of the municipal tax only might not bring equal success.

Another question should properly precede this: Is it desirable to offer pecuniary encouragement for forest planting on the prairies, in any form? This is an economical question with a political side; and if it be determined in the affirmative, then it is plain that any mode of encouragement to be adopted should be sufficient. And if it be not answered in the affirmative, it would be a waste of time to discuss it. The experience of other countries, notably the United States, not dissimiliarly circumstanced, has decided the question in the affirmative; and we think it would be safe to allow that experience to guide us a moderate distance in the direction to which it points.

It will be much if men's minds be imbued with the necessity and the desirability of tree planting in our north-west. Nor should those who could afford to do it wait for bonuses to supply the necessary stimulus to exertion. If the distant hope of bonuses caused men to wait till they could get them, that hope might prove a discouragement instead of an encouragement. Whether it will pay prairie farmers to grow patches of forest, it will assuredly pay them to grow trees for shelter for their cattle.

The effect of forests on climate remains to be considered. The presence of trees is pretty well admitted to conduce to rainfall. Treeless lands are sometimes barren, but by no means always. The Rocky Mountains, by their varying configuration, regulate the rainfall in different localities on the eastern slope. They deflect the clouds in particular directions, and leave some belts of soil barren. If the planting of forests could correct this defect, which is scarcely probable, it would be advisable to plant gradually up to the barren belts first, and then invade them, as a means of giving them the conditions of fertility.

All that anyone can hope to do at present is to attract attention to the subject of tree planting on the prairies. And this it will not be easy to do, since the average prairie farmer in our North-west has his attention so completely engrossed by matters of more immediate interest. If nurserymen would turn their attention to that quarter, something might be done. The kind of trees suitable to be grown there would have to be ascertained. As a rule, a much greater variety than is actually grown for ornamental trees could easily be secured; and though the characteristic vegetation of each region ought to be the chief concern, the attainment of the widest possible variety is undoubtedly desirable. —*Monetary Times.*

The Value of Lumber.

The *Northwestern Lumberman* can see nothing to indicate why lumber will materially depreciate in value, no matter at what time the period may be placed. It is not reasonable to expect that the great tide of emigratiou will lessen, so long as this is a Republican Government, and the countries from which the immigrants come are governed by kings and queens. The foreign element will erect houses, barns and fences upon the plains that are now unsettled, and there is no reason to suppose that they will cease to do so until the western prairie States are settled as thickly as Ohio and New York. The demand for building material will increase. In cities other materials will be used largely in place of lumber, as they always have been; but on the whole wooden buildings will be the rule, instead of the exception, long after every person living on the earth to-day shall have gone where, so far as is known, there is no interest taken in buildings built by hands. The future promises no reduction in the cost of production; on the contrary, it is almost absolutely certain that the lumber cut from the logs that will be secured the coming winter will cost more than that now being sold. Provisions and grain will be higher the hauls will be longer, and everywhere stumpage is increasing in value. The boom in pine lands is, of itself, indicative that the days of cheap lumber are numbered, and no inconsider able proportion of these lands are owned by men who, if necessary, are not only willing, but able to hold them.

Neither the demand nor the supply is an uncertain quantity. The former goes on with a stride that is increased from year to year, and the latter can be figured out with much precision. The ratio of increase of the young timber can calculated, and the amount of standing timber adapted for commercial purposes is pretty well known. It is unlike the supply of iron and coal in this respect. The beds of the latter may run an unmeasurable distance underground, and in directions least expected; but there is no timber out of sight.

MACHINES TO DESTROY.

To the Editor of the Scientific American.

You have in your issue of September 3 an article on "Fast Lumber Cutting in the Puget Sound." Yes, it is wonderful how we have progressed in wood cutting and wood working machinery, and we thereby cut up in ten years as much lumber as formerly would have taken one hundred years. We shall soon be in the same fix with all our timber scarcity as you described in an article lately on the black walnut. In fifty years from now, it seems, we can break up all our saw mills and wood working machinery, as there will be no timber to cut unless some one can come to our help and invent a timber growing machine. Are we not a great nation to invent machinery to destroy, so as to turn everything into cash.

G. H. TIMMERMAN.

St. Louis, Mo., September, 1881.

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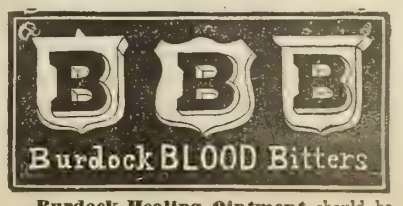

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DEVOTED TO THE LUMBER AND TIMBER INTERESTS OF THE DOMINION.

PUBLISHED SEMI-MONTHLY BY

TOKER & Co. PETERBOROUGH.

Terms of Subscription:

One copy, one year, in advance	$2 00
One copy, six months, in advance	1 00

Advertising Rates:

Per line, for one year	$0 90
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PETERBOROUGH, Ont. OCT. 1, 1881.

A FOREST DEPARTMENT.

Renewed interest in the subject of the management of our Woods and Forests has been awakened by recent events. The enormous devastation caused during the late dry season by forest fires, and the contemplated sale of timber limits in the Nipissing district by the Ontario Government, both deserve consideration, and have received it.

These two circumstances, though seemingly of such a widely different nature, in one aspect point in the same direction, and teach the same lesson. The bush fires have notoriously in many, if not in most, instances taken their start from the setters' fires for clearing purposes. Again, the necessity for the sale of the Nipissing timber limits, when their is already so much pine land under license, and the propriety of economizing our supply of standing timber is so well recognized, arises from the fact that settlers are already establishing themselves on the land in question. Not only, therefore, is a premature sale forced upon the Province, if it would avoid the risk of the destruction of this portion of its capital, but the very fact of the sale will inevitably lead to fresh antagonism between the settlers and the lumbermen with their divergent interests.

It is clear when such evil results arise that there is something wrong with our forest management. That a wasteful destruction of valuable property should constantly occur—that the premature consumption instead of economical use of our fast diminishing forest wealth should be encouraged, are in themselves sufficient proofs that our system is faulty and extravagant.

Does it not seem obvious that the difficulty arises from the want of proper classification of the Crown Lands of the Provinces? Surely it would not be difficult to decide what lands should be opened for settlement, and what might be more advantageously maintained permanently as forest. Where the land is well fitted for cultivation, it may be advisable to clear off the timber and then admit the settler as quickly as possible. On the other hand, where the soil is better fitted for forest growth than for agriculture, the settler should be excluded altogether, and a proper system should be adopted for perpetuating the timber growth. Thus our resources—our capital—would be utilized in the most fitting and economical manner. It is certain that mixing up settlement and lumbering has proved a failure.

We again urge the propriety of establishing a Bureau of Woods and Forests, which will take this and similar matters in hand.

AS OTHERS SEE US.

The following are extracts from a corespondent's letter to the *Scotsman* giving an interesting account of a flying visit he paid to Ottawa, detailing some of the sights he witnessed in that rapidly rising city—the capital of the Dominion of Canada:—"The leading thoroughfares," he says, "have been laid out on a handsome scale, and show a good many substantial buildings." Speaking of the cities he had visited throughout America, he says: "Not one can be said to have really tackled the most important object of municipal management. Quebec is a marvellous agglomeration of pitfalls and sloughs of despond; and in Montreal, though the foot pavements are somewhat better, the carriage ways, for that great commercial centre, are far from satisfactory. In the case of Ottawa, there is more or less paving to be seen along the principal thoroughfares, while the wooden sidewalks are kept in a fair state.

"Scarcely had I completed a general survey of Ottawa," he writes, "when I was taken in hand by a prominent citizen who had kindly undertaken to show the lions. We visited the extensive saw-mills, where timber, floated down the river from distances of fifty to a hundred miles, is cut up into boards. In their mechanical arrangements these mills are very much alike, though with more or less important variations in detail, suggested by the ingenuity of individual managers. In the river above them lie acres of logs, the shooting of which through long slides from a higher to a lower level is considered one of the local sights, and affords a certain mild sensation to tourists who care to trust themselves on the swiftly rushing rafts. Arrived at the mills, the logs are floated one by one into a still water dock, where they are clutched by machinery adapted to convert them into marketable boards with a minimum of manual labor. Hoisted up by means of a chain worked by gearing from the engine, a log is deposited on the travelling platform of a circular saw, revolving with such rapidity that in watching it you are reminded of Smith Mimer's sword, which went clean through a man without his feeling anything but a sort of coldness in his inwards. A minute more, and with a weird sound which fancy might interpret as a shriek of triumph over the giant of the forest, the saw has whisked off a slab from one side of the rounded bole, a process which is presently repeated as the other side confronts the relentless teeth. Being thus roughly squared, the log is slid upon another table, where verticle saws, spaced according to the thickness of the boards required, cut their way simultaneously through masses of solid timber. Fed continusly into this machine, the logs come out as so many sheaves of planking. The trimming of rough edges is the work of another moment; and the boards are then sent travelling over a set of endless chains to be, on reaching a certain point, cut to the desired length and delivered at the far end in a state fit for the market. In Ottawa alone the extent and importance of the trade give employment to several thousand persons, whose appearance speaks volumes for the healthy and well-paid character of their occupation. Such indeed is the present prosperity of the lumbering interest that one establishment here has been fitted with the electric light, and is kept running day and night. Being driven by water, the mills have of course, to be closed with the advent of winter; hence this eagerness to make hay while the sun shines. Pail-making, again, illustrates that speed of production attained by division of labor which, whatever may be said against it from the artistic point of view, undoubtedly gives the consumer the advantage of a cheapness otherwise unattainable. As you watch the first stage of the process, before you can count half a dozen, a deft-handed boy has slipped within an irom hoop the staves necessary to form a pail or tub. The hoop is driven tight, and the article passed on to a planing machine, by which, in a trice, inside and out are reduced to perfect smoothness. The cutting of a groove and insertion of the bottom are accomplished with equal celerity; and, ere you have time to turn, the vessel has been fitted with a handle, and ready for the market.

"The power employed in the Ottawa mills is derived from the noble river which, just on the western verge of the town, forms a cataract ranked next to Niagara among the waterfalls of this continent. The depth of the descent does not exceed 40 or 50 ft.; but so great is the volume of water tumbling over a rocky ledge, some 200 feet in length, so terrible the turmoil of the seething caldron which receives its thundering fall, amid clouds of rainbow-tinted spray, that the effect, more especially when viewed from a platform in close proximity, is impressive to the pith of the sublime. Noting how the mill-wheel water passes off as a mere driblet from the edges of the current, one feels that in this enormous magazine of natural force there is a motive power far more than enough to propel all the saw-mills of Canada."

HOW TO FIGURE SPEED.—THE REASON WHY.

To the Editor of the Canada Lumberman.

SIR,—I notice in your last issue an article under the above title, written, as I understand it, for the purpose of explaining, in a plain way, the principle upon which the rule for computing the relative rates of speed between *driving* and *driven* pulleys of given sizes, as also the relative sizes of such pulleys for given rates of speed is based, for the special benefit of such parties interested as are supposed to be *unlearned* in such matters.

The object is a commendable one, and the writer evidently has a knowledge of the subject, but in presenting the "reasons why" in such a manner as to be easily understood by those for whom they are intended, and to be of practical use to them, the paper appears, to my mind, to be a failure.

The writer describes "the 'rule' laid down in the 'books'" for the solution of this problem—giving the diameter and speed of a driving pulley to find the speed of a driven pulley of a given diameter—to be, "multiply the diameter of the driving pulley by its revolutions per minute, and divide by the diameter of the driven pulley." Of course, if it were required to find the *size of a driven pulley* to produce a *given rate of speed*, the rule would be—Multiply as before, and divide by the number of revolutions of the driven pulley.

With your permission, I will give my version of the "reasons why" for the above rules.

From the article referred to I quote the following example:—"Suppose the diameter of driver was 25 inches, its speed 180, and a speed of 600 was required, what would be the diameter of the driven pulley?"

The relative rate of speed of the two pulleys respectively is in *inverse* proportion to their respective diameters, therefore the above question should be stated thus:—

As 180 : 25 : : 600 : diameter driven pulley. Fvery schoolboy knowns that to work this out, you multiply the first and second terms, and divide by the third, say—

$$\frac{180 \times 25}{600} = 7\tfrac{1}{2}, \text{ the diameter required.}$$

In this operation you exemplify the "rule"—"Multiply the diameter of the driving pulley by its rate of speed, and divide by the speed of the driven pulley," clearly illustrating the principle upon which it is based.

To avoid complications and confusion in computing, where counter shafts are used, apply the above simple rule to *each motion separately* in regular order, either forward or backward, and you will arrive at a correct conclusion, no matter how many changes of speed or "train of gearing" there may be between the *first* motion and the *last* one.

Hoping this may be of use to some of your eaders, I am, yours truly,

COGG WHEEL.

St. John, N.B., Sept. 21.

The good accomplished with steel pens is incalculable, but the cost of a box of Esterbrook's is only nominal. The stationers have them. The trade supplied by Brown Bros., Toronto.

TIMBER LIMITS BURNT.

The Kingston *Whig*, of Sept. 20th, says:—Last evening a gentleman who has just arrived from "away back," was interviewed in relation to the destruction caused by fires, which of late have been so terrible, convincing settlers of the danger of starting them in dry times in order to clear their farms. The west part of Clarendon and the whole of Miller have been swept over by the fiery scourge, carrying destitution and loss.

Mr. Leopold Ohlman, who resides at a place near the mountain, has lost his barns, house, crops and fences.

Mr. J. Stalker has been a sufferer to a similar extent. The people are thankful that their lives have been spared.

The fire is now in the pineries, and it is asserted that the limits of William Mackay, of Ottawa, have been greatly damaged. They were all burned over, and to preserve the charred timber from further destruction by borers and dry rot Mr. Mackay will need at once to remove the partially destroyed tree trunks and have them sawn up. A large number of men will be wanted to do this work.

Mr. McLaren's limits have also been burned over. The camps of the lumbermen in both Mackay's and McLaren's limits have been burned, but the depots and supply house have not fallen a prey to the ravaging flames. It is hard to say what the extent of the damage has been.

The heaviest losser to the farmers will be those of their crops and fences. The wood is not of as much consequence to them as it is to the people of the cities who depend on the forest in the rear for their fuel supply.

The fires around Plevna are still raging, but there is now no fear of the destruction of the village. Yesterday the fires were but a few miles from Plevna.

Not much disaster so far has been wrought in Palmerston, the residents of which are very particular as to fire.

Canonto, which has not yet been much settled, but which is now open to settlements, has been all burned over and many acres are described as "a smouldering fire bed." The sight at night is said to have been grand. The country for miles has been lit up by the flames. A short time ago our informant drove out some miles to see the conflagration work up this side of what is known as the mountain. The scene was impressive, the flames creeping up the tall trees and leaping higher and higher until they reached the craggy peak. The fantastic and wierd shapes in which the seething flames twisted presented an unparelleled sight in this vicinity. For some hours afterwards the glowing fire could be seen eating its way into the pines. It is stated that even green hardwood has fallen a prey to the destructive element. This is an unusual occurrence, due to the fact that the trees are now almost devoid of sap. The fires will smoulder for a long time unless rain falls.

The most mischievious fire observable is that which runs along the line of the K. & P. R., especially between Parham and the Mississippi.

Saw Mills Burned.

PHELPSTON, Sept. 26.—About six o'clock this evening Aanderson & Tennant's large saw mills, known as the Anten Mills, at Hendrie, three miles south of here, were burnt. The fire burst out suddenly near the boiler-room, and when discovered the interior was a mass of flames. The mill was totally destroyed; cause unknown. Its value was from $15,000 to $18,000. The insurance is reported from seven to ten thousand dollars. Very little lumber was burned. The Northern and North Western Railway lose flat cars, burnt.

THE *Monetary Times* says that an enterprise of some importance is the cooperage of Messrs. Pike and Richardson, of Pikeville, near Chatham, Ont., who have contracted with parties in Europe to furnish five million elm hoops, twenty-five million elm staves and basswood headings innumerable. The firm has factories at Bismarck, Rodney, Comber, Tibury, Charing Cross and Buxton. They employ 370 men, besides those engaged in getting out logs, while the capacity of the works is 30,000,000 staves, 6,000,000 hoops, and 1,000,000 set barrel staves.

IMPORTANT MEETING.

THE SUBJECT OF FOREST FIRES CONSIDERED—ESSAY ON FORESTRY.

At the meeting of the Ontario Agricultural Association, held in the City Hall, London, on September 21st, prize essays on forestry were read.

Mr. J. H. Aylesworth presided, and on the platform were professors Bell and Mills.

Professor Bell explained the objects of the meeting, and said the necessity for precautions being taken by the Government for the preservation of the forests was becoming more and more obvious. The essay which had been awarded the first prize by Professor Buckland, Mills and himself was written by Mr. D. Nichol. of Cataraqui, Frontenac county. He then read the essay, which embraced a list of all trees indigenous to the country, with the habits and values of the same, and their adaptability to the different soils. Directions for planting were also given at length, and some valuable information in regard to the destruction of forests by fire and other causes. The essay included a description of shrubs suitable for hedge plants, and the white cedar was highly recommended for that purpose. A mass of valuable information on the subject was contained in the essay.

Prof. Bell could corroborate what was said in regard to the white cedar for hedges from personal observation. The locust was also valuable for such purposes.

Prof. Mills proposed that Prof. Bucke's essay on the same subject be read by the writer, as his observations on the subject were the result of a long experience.

Prof. Bucke's essay referred to the immense destruction of forest areas by the early settlers of the country. At that time it would have been rediculed if the proposal to save the timber had been made. He spoke of the timber interest as second only to that of agriculture in this country. The health-preserving properties of forests was pointed out, and the many other benefits derived from their presence. The annual revenue derived from the timber lands of Ontario aggregated over $400,000. The destruction by fires was dwelt on, and some surprising statements made in regard to this. More trees have been destroyed by these bush fires than have ever been exported from the country. Some of the precautions taken by the Government against this destruction were related, and examples were drawn from those countries in which the tree-felling was regulated strictly by the government. From the time occupied by hardwood in coming to maturity—80 to 150 years—it was most obvious that the government must become the producer. No private individual could undertake such a work. In the neighboring republic great encouragement was given to tree raising, by free grants of land, etc., for that purpose. One of the largest exporters in the country expressed his opinion that in twenty years there will be no pine to export from Canada. In conclusion, he stated that it was absolutely necessary that forest fires should be suppressed, and the Government ought to take steps for enforcing precautions having this effect in view. Secondly—the pine lands remaining should not be settled. Thirdly—waste lands should be immediately planted. The destruction of the forests, he said, would lead to the gradual decrease of rainfall and other evils.

Professor Bell said the object which the Society had in view in offering prizes for these essays was to draw the attention to a subject which was of vital importance to the country.—*Free Press.*

DYSPEPSIA.—Strenthen your digestion—tone the stomach for utilizing and assimilating every atom of food you take; the body needs it for strength and vigor. *Zopesa* cleanses the entire system, stimulates the Liver, keeps you regular, and able to eat ten-penny nails. Letters and postal cards come in daily, telling of cures and help frem *Zopesa*, from Brazil. *Positive proof* of the health and vigor it gives in a ten cent sample. Ask your druggist.

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OMEMEE.

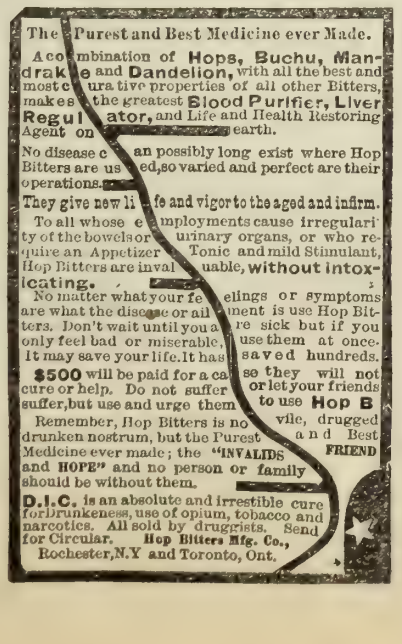
KINCAID'S MILLS.—We are pleased to notice the increased business which has sprung up in connection with Mr. Kincaid's saw, shingle and planing mills here. The product of these mills for the past season has been as follows:—Half a million feet of pine lumber, half a million of shingles, and two hundred thousand feet of hardwood, besides supplying the local demand and attending to large orders connected with building operations. Mr. Kincaid has shut down at present for want of water to bring logs to the mills. He was to leave for the woods on the 22nd Sept. to get out more logs from his limits in the township of Harvey. The bush fires made considerable havoc in these limits, destroying a large number of logs, &c.

Cedar Strips.

A Saginaw man has devised machinery for manufacturing cedar strips with which to line trunks. The machinery consists of a set of knives six and one-half feet long, which begin on the outside of a cedar log and cut it lengthwise into strips of any thickness required from the thirty-second to half an inch in thickness, the strips being delivered in a compact roll ready for use as soon as cut. The importance of this manufacture consists in the fact that cedar wood is a complete protection against all kinds of vermin, such an ants, cockroaches, lice, moths, and worms of all kinds. This ceiling can also be used for pantries, clothes presses, store-rooms, and all other apartments in the house, where insect pests are apt to be found. It can also be used for flooring. By the new method, the difficulty occasioned by the smallness and imperfection of cedar logs is overcome. By paring the strips thin, they can be made fifty feet long, and their flexibility prevents their breaking. For ceilings, the edges are beveled and glued together. It has been suggested that these thin cedar strips be used for mattresses.

Kentucky's Biggest Tree Felled.

The Louisville *Commercial* reports the felling of Kentucky's largest tree near Carr's. The tree measured 18 feet in diameter at the base. The cut was made 6 feet above the ground, where the tree was 12 feet through. The *Commercial* adds:—"From the cut to the first limb can be made eight good length rail cuts, each 10 feet long, which would split enough rails to fence a small farm. The first limb was nearly a dozen feet in diameter, and it would have, by itself, made a very large sawlog. Nearly all the small limbs had fallen and decayed away. Its plank measurement is computed at nearly 50,000 feet, besides several limbs that would make altegether, 25 cords of wood. On the day of the felling a large concourse of people marched from Vanceburg to the place. Colonel W. S. Rand, an able speaker, was the orator of the day. He and others, qualified to be good judges of such things, supposed that this mighty forester was four or five centuries old. There were to be distinctly seen over 300 rings, and it is not known how long since it completed its growth, as it has been dead for many years.



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SALE OF TIMBER LIMITS.

The Ottawa *Free Press*, of Sept. 20th, says :—The announcement that there would be sales of timber limits by Messrs. Brewer and Tackaberry at the Grand Union this afternoon attracted to that place a large crowd of buyers and others. By two o'clock the spacious main office of the hotel was crowded with lumbermen, lawyers and business men, who were either engaged in conversation or examining the maps of the various limits which adorned the walls of the room.

About half-past two o'clock loud voices were heard in one corner of the room, rising over the general hum of conversation which filled the air. In the midst of the crowd, talking at the top of their voices and gesticulating wildly, were seen the two auctioneers. The matter in dispute was as the order in which the sales should conducted. It seems that both the auctioneers had advertised their sales to take place at two o'clock, and as it was obvious that they could not both sell at once, the question arose as to who should sell first. Each of the rivals had his friends who warmly espoused his cause. What with the loud tones of the auctioneers, the applause of their friends, and the suggestions of disinterested bystanders, there was a perfect babel of voices. In the midst of the hubbub, auctioneer Macdonald announced that he had intended to offer a farm for sale, but owing to the death of President Garfield, he would postpone it until after the funeral. This announcement was greeted with cheers and laughter, and had the effect of restoring good humor among the excited partizans of the two auctioneers.

A few minutes later Mr. Brewer mounted a chair and addressed the crowd. He said he was willing to do anything that was fair. He was willing to leave the matter in the hands of his employers, who should make an arrangement with Mr. Tackaberry's employers. They, and not the auctioneers, were the proper people to settle the question.

No sooner had Mr. Brewer vacated the chair than it was mounted by Mr. Tackaberry, who claimed that his sales had been advertised a long time before Mr. Brewer's, and hinted that the latter had unfairly fixed the date of his sale of poor limits on the same day in order to take advantage of the crowd who would come to purchase his (Tackaberry's) good limits.

Mr. Brewer retorted that the last speaker had never had a limit to sell at the time he had first advertised them ; but that before starting for Manitoba he had stuck his name to the advertisement in order to let people know that he was coming back.

Then ensued a most amusing scene. The rival auctioneers jumped up and down off the chair alternately, and addressed the crowd in a highly excited manner. Recriminations and epithets the reverse of complimentary issued from the mouths of the speakers in the most lively manner. Auctioneer Tackaberry said this was no place for squabbling, and darkly hinted that the matter might be finished elsewhere. Just as it began to look as though the war might develop into something more than a wordy one, auctioneer Macdonald once more restored temporary good humor by shouting out that if both auctioneers would give in, he would sell the whole of the limits himself.

Hostilities ceased for a time, and about ten minutes later Mr. Tackaberry offered for sale Campbell's limit of 39 square miles, situated on the Trent Lake branch of the Petewawa river. The limit was put up *en bloc*, the first bid being $15,000. The building was not very lively, and slowly by bids of $1,000 apiece $26,000 was reached. The bidding then hung fire for quite a time, until a voice in the rear of the crowd offered $500 better. Half a dozen more bids of $500 increase at a time brought the amount up to $29,500, when the bidding ceased and the limit was knocked down to Mr. Wm. Moore for that sum.

While Mr. Tackaberry had been engaged with this sale, his rival mounted a chair in another part of the room, took documents and maps out of his pocket, and made every preparation for beginning a sale as soon as Mr. Tackaberry finished his first one. No sooner had the first limit been knocked down than Mr. Brewer announced, in loud tones, that he was instructed to offer for sale a limit of fifty square miles on the River Cologne, known as the Bryson limit. Mr. Tackaberry appealed to his audience not to leave him, as he intended to go right on selling. In proof of this, he commenced to read the description and terms of sale of another limit. Both auctioneers then attempted to conduct their sales at one and the same time. The result was a scene which was probably never witnessed at an auction before in Ottawa. What with the handsome room, the large crowd of shrewd looking business men with pencil and note book in hand, and the confused babel of voices, over which arose clear and distinct the voices of the auctioneers, it could not but remind the spectator who had visited the New York Gold Exchange in its palmy days of that famous institution. Both actioneers talked for all he was worth, but scarcely a word either said could be distinguished. After a few moments Mr. Tackaberry's voice ceased for a time and bidding on Mr. Brewer's sale commenced. The first bid was for $2,000, and it rapidly ran up from that to $8,500. Mr. Tackaberry then recommenced, and the confusion was worse than ever. A few moments later Mr. Gormully, who represented some of the parties for whom Mr. Tackaberry was selling, came over to Mr. Brewer and informed him that it had been agreed that the sales should be conducted alternately.

Harmony having thus been restored, Mr. Brewer proceeded with his sale, and the bidding advanced to $9,000, when it ceased. After consultation with his employers, Mr. Brewer then announced that the bidding having not come up to the expectation the limit would be withdrawn.

Mr. Tackaberry then put up a limit of fifty square miles situated between the Desmoine and Coulonge rivers, at present owned by Sir Francis Hincks, who was present. The first bid was for $100 per mile, and the second for $110. Here the bidding ceased and the limit was withdrawn.

Forest Fires.

The plague of smoke has settled down over Ontario. On Monday evening the darkness was so complete in the vicinity of Kingston as to be comparable only to that described as having visited Egypt in the time of Moses, while further west the colors which the sky displayed seemed to be reflections of the bottomless pit. So powerfully did these appearances work upon the imagination of the people that the possible near approach of the day of judgment became a subject of concern with many, while the most painful rumors of calamities to neighboring cities were flying in all directions. By forest fires an enormous amount of good property is being destroyed. We presume the gases of the smoke, when they reach the ground, make the best of manure, but it is manure of a very expensive kind, as we shall find in a few years when timber becomes scarce. It is very hard for the Canadian to realize the state of things which is approaching. So long has it been our lot to contend with the forest that we look upon it rather as an enemy than as a friend. But it requires little knowledge to see that the splendid lumber regions of Michigan and Canada are diminishing at a tremendous and ever accelerating pace, and that the demands of the continent are increasing with like rapidity. For railway ties alone the demand on our forests must be enormous just now. It becomes, then, a matter of life and death to protect the forests. This seems to persons used to the liberty of this country a simple impossibility. It is, however, a thing which has been achieved elsewhere and can be achieved here. It would be very queer in the eyes of a woodsman to be told, for instance, that he must on no account smoke in the bush, mosquitoes or no mosquitoes, and must only make fires under certain regulations. Yet such are the laws in Sweden, with the result of maintaining the forests of that country from year to year in undiminished productiveness. We are not prepared for such absolute laws here, but it is high time steps where taken to make forest fires less common. One thing that might be done is to have fire inspectors whose duty would be to report on the cause of every forest fire, large and small, and to suggest means to prevent the recurrence of the cause when discovered.—*Montreal Witness.*

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THE AMERICAN TRADE.

The *Northwestern Lumberman*, of September 17th, says that but few changes in prices have been reported during the past week. Since the advance following the one made by the Chicago dealers, August 27, prices have been steady and very firm. With a single exception, there has been no weakness in the leading markets throughout the country. The volume of orders has been large, in many cases exceeding the ability of the dealers to supply. From Toledo we learn that the stock of dry lumber is nearly exhausted, and that some kinds are bringing more than price list quotations. Philadelphia has low stocks in some grades, and is looking toward another advance. The mills at Williamsport have shut down on account of low water, which, if it continues, will be liable to somewhat affect prices in that locality. Burlington, Vt., reports an extraordinary heavy trade, with every indication that it will continue throughout the season.

A lack of transportation facilities is common, not only in the west, but in the east as well. The shipment of orders is much delayed for want of cars, and as a consequence lumber is accumulating on the docks and mill-yards. Water freights are firmer, and in some cases have materially advanced. It is expected that the scarcity of cars will be more marked as the crops of the season begin to move more freely.

An extensive corespondence shows that stocks in the country yards are nowhere heavy, and we often hear the expression that at present they will be allowed to remain in that condition. Building operations have been suspended to some extent, more particularly among the farmers. The high prices obtained for their farm products may cause a revival, but it is sure to come late, and probably not to any extent until the coming spring.

In the Duluth region, and throughout Wisconsin, many of the mills that were filling their orders slowly, and in some cases were doubtful about their ability to fill some of them at all, have now plenty of logs, the late rains causing clean drives. Often it is necessary to ship lumber as fast as it comes from the saw, but the ones who were behind are glad to be able to do even as well as that.

Sad Waste.

One reason why the cabinet woods of the country are scarcer and dearer yearly is given in the editorial correspondence of the Chicago *Industrial World*. The gentleman has been spying out the land, and in the course of much interesting information, says :—"The unaccountable waste of timber is startling, if not appalling. While economists and all thoughtful men in the older States are gravely discussing the problem of the coming timber famine, the good natured, easy going farmers of Henry county (and all Missouri) are splitting magnificent walnut, butternut, cherry and mulberry trees into common rails for the enclosure of $8, $12 and $20 lands, cutting them into logs for cabins, hovels and pig troughs, and even into common cordwood to sell on the market in competition with cheap coals. Still worse, many a woodland farmer girdles scores of valuable trees (even the stumps of which will be gathered for the coming markets), burns them in the new clearings, side by side with the baser woods, and wonders the while that he must pay enormous prices for solid walnut furniture from factories a thousand miles away."

A Black List.

The happenings of the past week in business circles in Ontario include a grave list of losses by fire. Accounts of forests blazing and homesteads destroyed in a number of western counties are followed by those of mills and factories devoured by the flames. Two planing mills, a hotel and two wagon shops are burned is Listowel ; Coates' shingle mill at Barrie, John Boyd's planing mill and J. P. White's mills at Whitevale are also burned ; Thos. Ouillette, an extensive shipper of woods from the county of Essex has, we regret to see, sustained a heavy loss by the burning of his mill and piles of lumber at Gordon ; Thomas Green & Co.'s planing mill in London is burned, and H. C. Green sustains a loss on lumber ; W. A. Fraser, lumberer, Wallaceburg, is burned out ; so is Henry Wells, of Salford.—*Monetary Times.*

BUSH FIRES AGAIN.

GREAT DESTRUCTION.—VILLAGES, SAW MILLS, LUMBER, FARMS, ETC.

Gravenhurst Station, Sept. 16.—The Woodstock Lumber Company's mill stock, about three millions, has been entirely consumed. The stock belongs to McDonogh, McCool & Oliver, of Toronto. It is understood to be insured, but to what extent is unknown. The whole of West Gravenhurst is burning at this moment (4.15 p.m.) One church and six houses have already gone, and if the wind, which is now blowing a gale, continues, another mill will go containing about two and a half million. The fire is already running in the sawdust. We have lost one car, and there are six more in danger which we cannot get at, the track being burned.

Lindsay, Sept. 16.—The bush fires last night were very disastrous. A strong wind prevailed all day, which almost rose to a hurricane during the evening. Losses by fire are reported this morning from all quarters. A bridge on the Victoria railway, near Kinmount, was burned ; also the saw-mill and a large quantity of lumber belonging to Mr. Ashman, of Eldon. The barns of J. Burmingham and D. Jameson, in the same township, were destroyed with their contents. The wind continues high to-day, and it is feared that the fires will again start afresh. At one time last night it was expected the station buildings at Fenelon Falls would be burned, but by the efforts of the villagers they were saved.

How to Render Wood Fire-Proof.

F. Folbarry, of New York, has devised a method of making wood incombustible without, in any way, altering its outward appearance. Wood prepared in accordance with his process may possibly be charred just at the surface, but the heat to which it is exposed, though ever intense, can never penetrate right into the wood, and touch its fibres. Timber petrified in this way is particularly suitable to staircases that are to resist a conflagration. The composition devised by the inventor is as follows :—55 pounds of sulphate of zinc, 22 pounds of potash, 44 pounds of alum, 22 pounds of sesquioxide of manganese, 22 pounds of sulphuric acid at 60°, and 45 pounds of water. The whole of the solid ubstances are put in an iron vessel containing the water at a temperature of 113° F. When all this solid matter is dissolved, the sulphuric acid is poured in slowly until the whole is saturated with it. The solution is now ready, and in order to prepare timber with it the pieces must be put on an iron grate in a suitable recipient, in accordance with the size of the pieces and the object for which they are intended, care being taken to leave half an inch between any two pieces. The composition is pumped into the recipient, and after the whole of the spaces have been filled up, it is left there in a boiling state for about three hours. The wood is then taken out and placed on a grate like wooden stand in the open air, to make it dry and firm. When thus prepared the impregnated wood may be used for ship-building, and building in general, for railway carriages, scaffoldings, posts, wooden pavements, and generally for all purposes, while it is desirable that the material should be able to resist fire.

On Piling Wood.

Many people who handle wood do not know that if they wish the bark to come off they should pile it bark down ; if they wish to retain the bark, the opposite course should be taken. A correspondent writes to the Detroit *Post-Tribune* giving his experience, as follows :—I have sold wood for over forty years in Michigan, and I find that when split wood is corded bark up it remains on until I sell and measure up the wood, and all that is piled bark down the bark falls off and measures nothing ; besides, there is more heat in the bark than in the sap of the log. The most and best ashes are also in the bark. I have on my place now some maple wood that was chopped nine years ago and corded bark up, and the bark would hold on if I would draw the wood to Saginaw (18 miles) and cord up and measure ; besides, the bark is lighter to draw. Where the bark is piled down the water runs in around the wood and makes it dozy, wet and heavy. Tell your neighbors to try it. Railroad companies would save thousands of dollars by piling their wood bark up.

THE LIVERRPOOL TRADE.

Robert Coltart & Co.'s Wood Circular and Prices Current, dated Liverpool, 3rd of September, says:—

During the past month there has been a fair consumption, and prices generally have been well maintained, with a slight advance in some articles. The import as a whole has been on a moderate scale, but some stocks, especially pitch pine, still remain too large for the present demand; altogether there is a better feeling in the trade than has been observed for several months, only modified by the bad weather and gloomy prospects in the agricultural districts, where there is little hope of anything beyond a very deficient harvest.

COLONIAL WOODS.—Of square pine the import has been light, but the higher prices now asked have curtailed the consumption, which has amounted only to 85,000 feet, against 255,000 feet during the same period last year; the sales have been by retail. Waney board pine has arrived more feely, and the stock has considerably increased; a parcel of second quality, 15½-inch average, has been sold at 22d. per foot. Of red pine a parcel of poor quality has been sold at 15d. per foot. For ash the demand is dull, prime wood only being wanted. A parcel of elm, 46 feet average, is reported sold at 23d. per foot. For oak the demand continues limited, and the arrivals are being held for better prices. The demand for wagon scantlings is good, and with the present moderate import, prices should improve. The consumption of birch continues limited, and the stock is about equal to that held at the same time last year; by auction, 161 logs from Oak Bay were sold at prices ranging from 13¼d. to 18½d. per foot, and Dalhousie at 14d. to 16d. per foot. Black walnut has been sold at prices ranging from 4s. 7d. to 5s. 2½d. per foot. The import of N. B. and N. S. spruce deals has consisted of 11,828 standards against 8,279 standards during during the same period last year, but the consumption has also been on a large scale, namely, 12,603 standards; the present stock amounts to 16,605 standards; prices during the month have been fully maintained, openine at £6 15s. per per standard for St. John, and afterwards improving to £7 per standard; by auction the cago ex *New City* from St. John was sold at an average of £6 6s. 3d. per standard, Miramichi at £6 15s. 8d. per standard, and Oak Bay, N.S., at £6 14s. 10d. per standard; by private, St. John have been sold at £7 per standard, Musquash at £6 16s. 3d., and Bay Verte at £6 12s. 6d. per standard. Of Quebec pine deals the stock still remains heavy, consisting of 9,742 standards against 4,508 standards at the same time last year; there has, however, been a good consumption, and prices are without material change; 1st quality broad realized at auction £22 10s. and £23 per standard. Quebec merchantable pipe staves have been sold at £37 10s. per mille, and puncheon at £22 per mille.

NORTH OF EUROPE WOODS.—For fir timber the demand continues languid, and the stock is sufficient. Sales have been by retail only. The import of Norway flooring boards has been extremely light, and the consumption, although moderate, shows an increase over the same month last year; the present stock is not heavy. Prices have improved during the month, and sales have been made on a basis of £8 15s. per standard for 1st white, but shippers now hold aut for higher prices. Of red deals several contract cargoes have arrived from Archangel, Onega, &c., and are going well into consumption. For mining timber the demand is dull. Masts and spars are inquired for. Fir staves have been sold at £7 7s. 6d. per standard c.i.f.

UNITED STATES, ETC. WOODS.—The stock of pitch pine is heavy, consisting of 1,410,000 feet, against 578,000 feet at the same time last year, and 847,000 feet in 1879. There has been a fair consumption, and the tendency of prices is upwards, no doubt induced by the high price of Quebec pine. By auction, the cargo of hewn timber, ex *Martin Luther*, from Pensacola, averaged about 16½d. per foot for 85 feet average, and 16⅝d. per foot for 31 feet average sawn. A parcel of prepared pitch pine flooring boards was sold by auction at £18 10s. per standard for 1¼x5 to 7; £17 5s. standard for 1x5 to 7, and £16 15s. per standard for 1x4 and 5. Oak Staves—New Orleans extra heavy pine have been sold at from £60 10s. to £65 per mile; hogshead at £45 per mille, and barrel at £24 per mille.

PRICES.—FROM BRITISH AMERICA.

Yellow Pine Timber.	£	s.	d.	£	s.	d.
Quebec, per cubic foot	0	1	2	0	2	2
" Waney board.	0	2	0	0	2	6
St. John's, 18 inches average	0	1	8	0	2	0
Other ports	0	1	2	0	1	5
Red Pine, Quebec	0	1	2	0	1	7
Oak	0	2	8	0	2	11
Elm	0	1	8	0	2	0
Ash	0	1	6	0	2	0
Birch, St. John	0	1	2	0	1	5
Quebec	0	1	5	0	1	7
Nova Scotia	0	1	0	0	1	1
Spars, Spruce	0	0	10	0	1	0
Deals, Quebec and Michigan Pine—						
1st quality, per standard	19	0	0	20	10	0
2nd quality, per standard	13	10	0	14	0	0
3rd quality, per standard	8	5	0	8	15	0
Planks—						
Spruce, St. John	6	17	6	7	0	0
Nova Scotia, etc.	6	12	6	6	17	6
Staves—						
Quebec Merchantable Pipe, per M	75	0	0	80	0	0
Quebec Culls, per M	50	0	0	57	10	0
West India Merchantable Pipe, per M	20	0	0	21	0	0
West India Culls, per M	15	0	0	16	0	0
Oars, Ash, per running foot	0	0	2¼	0	0	3
Handspikes, Hickory, per dozen	0	16	0	0	18	0
Lathwood, per fathom, 4 feet	4	0	0	4	10	0

FROM THE UNITED STATES.

Hewn pitch pine, per cubic foot	0	1	3	0	1	5
Sawn picth pine, per cubic foot	0	1	3	0	1	7
Prepared pitch pine flooring, Pet. std	16	0	0	19	0	0
Oak logs	0	2	0	0	2	6
Teakwood, East India, per load	10	10	0	13	0	0
Greenheart	6	0	0	6	10	0

NEW BRUNSWICK SHIPMENTS.

From January 1st to September 1st, of this year, the shipments from St. John, N. B., were as follows, giving the details of their respective destination:—

	Deals and battens.	Boards and scant'g.	Palings.	Pine.	Birch.
Bristol Channel.	23,056,246	1,147,635	8,150	...	.....
Liverpool	42,495,055	1,836,983	207,795	743	2,938
Continent	14,810,822	171,113	5,000	...	.....
Glasgow	6,974,710	294,160	.....	...	.....
Queenstown	1,232,549	37,674	400	...	.....
London	5,680,372	430,096	.....	...	.....
Barrow	1,002,127	11,544	.....	...	.....
Fleetwood	446,008	.....	.....	...	.....
Carnarvon	336,891	297	.....	...	650
Australia	1,205,804	82,607	55,620	...	.....
Africa	1,009,331	114,324	.....	...	.....
Ayr	415,115	.....	.....	...	.....
Faversham	689,983	1,008	.....	...	.....
Plymouth	440,546	.....	.....	...	.....
Belfast	5,578,064	.....	.....	...	.....
Dundalk	840,959	.....	.....	25	6
Limerick	1,770,326	.....	.....	...	.....
Londonderry	2,277,629	.....	.....	...	.....
Waterford	332,346	.....	.....	...	4
Sligo	405,793	.....	.....	...	.....
Wexford	337,882	.....	.....	...	9
Newry	1,721,570	1,167	.....	...	.....
Drogheda	767,119	.....	.....	...	.....
Clonakility	319,604	.....	.....	...	.....
Cork Quay	4,693,388	52,455	.....	...	.....
Portrush	641,116	.....	.....	...	.....
Dublin	7,641,282	20,488	.....	...	.....
Westport	633,294	.....	.....	...	.....
Bantry	426,662	.....	.....	...	.....
Galway	546,795	.....	.....	...	.....
Warrenpoint	1,078,647	.....	8,000	...	.....
Kenmare	312,511	.....	.....	...	.....
Clifden	226,035	.....	.....	...	.....
Dungarven	422,659	.....	.....	...	.....
Wicklow	341,540	.....	.....	...	.....
Clare Castle	315,624	.....	.....	...	.....
Hare Island	567,739	.....	.....	...	.....
	133,994,143	4,201,613	284,965	768	3,609

THE WORST GENERAL in the battle field of life is general debility, which the vital forces often fail to conquor. Burdock Blood Bitters are ever victorious against all attacks of chronic disease, they regulate the bowels, act upon the kidneys, liver, and all the secretions, tone up the debilitated system, strengthen the nerves, purify the blood and restore lost vitality One dollar per bottle. All dealers in medicine can supply you.—T. MILBURN & Co., Toronto, General Agents.

D. S. BRIGGS,
9 TORONTO STREET, TORONTO.
WHOLESALE DEALER IN
Clear, Pickings, Common and Hardwood Lumber, Lath, Shingles, &c.
BILL STUFF CUT TO ORDER.
L12-1y

J. K. POST & CO.
LUMBER MERCHANTS
And Shipping Agents.
OSWEGO, N. Y.
L12-1y

JAMES HADDEN,
MANUFACTURER OF
Shingles and Dressed Stuff.
Foxmead, P. O., County of Simcoe, Ont.
Two Planers for sale or exchange for a Boiler. b26

S. S. MUTTON & Co.,
Wholesale Lumber Dealers
TORONTO.
We have for Sale a large quantity of PINE, OAK, WHITEWOOD, ASH, CHESTNUT, CHERRY, BUTTERNUT, BASSWOOD, &c.
☞P.S.—A SET OF TUB MACHINERY FOR SALE, CHEAP—OR EXCHANGE FOR LUMBER. 1yL16

A. L. UNDERWOOD
WHOLESALE DEALER IN
White Pine, Basswood & Hardwood,
82 King Street East,
TORONTO, ONT.
1yL16

J. G. EDWARDS
HARDWARE MERCHANT,
LINDSAY.
BELTING, FILES, BABBIT METAL,
1y CHAINS, ROPE, and L17
LUMBERING SUPPLIES.

WANTED.
Cherry, White Ash, Black Ash, and Dry White Pine Lumber.
Quote Price delivered, and Carefully Describe:—Quality, Widths, Length, Thickness, and how long Sawed.
ROBERT C. LOWRY,
Wholesale Lumber,
12L19 55 Pine Street, New York.

WISDOM & FISH
IMPORTERS AND DEALERS IN
Rubber and Leather Belting
RUBBER HOSE, STEAM PACKING,
LUBRICATING OILS, COTTON WASTE
Wrought Iron Pipe and Fittings,
And all Articles used in the Application of Steam to Machinery.
No. 41 Dock Street, St. John, N. B.
(SMALL'S BLOCK.)
N.B.—Estimates for Steam and Hot Water Heating Apparatus furnished on application. All work Warranted. 1y-L20

SAMUEL WINDRIM,
MANUFACTURER OF
Agricultural Implements, Etc
MILLBROOK, ONTARIO.
HAVING DISPENSED WITH THE SERVICES OF AGENTS, I take this opportunity to bring to the notice of intending purchasers of Reaping Machines, that I have now on hand a quantity of the Celebrated
HANLAN REAPER,
which has NEVER BEEN BEATEN YET, and am prepared to allow the Agents commission—FIFTEEN PER CENT—on all purchases. L17tf

Penetanguishene Foundry
AND
MACHINE SHOP
CRAIG & CAMERON, Proprietors.
The undersigned beg to announce to the public that they are prepared to make all kinds of Mill and Steamboat Brass and Iron Castings.
All kinds of PLOW CASTINGS kept on hand. Plow Points and Landsides a specialty.
We have first-class machinery and are prepared to do all kinds of TURNING or PLANING on short notice.
We hope by strict attention to business and moderate charges, to merit a share of the public patronage.
☞All work guaranteed.
G. A. CRAIG.
1yL17 C. CAMERON.

FOR SALE.
The Dexter & Whitwam Manufacturing Company, offer for Sale the Entire
Real Estate Plant and Machinery
OF THEIR EXTENSIVE
BENDING & TURNING FACTORY
Situated in the City of St. Thomas, in the County of Elgin, Ontario. For full particulars apply to H. BROWN, Manager, or E. MOORE, President. L20tf

J. T. LAMBERT,
Lumber and Commission Agent.
FOR SALE.

150	Mlls.	White Pine,	1 x 10 Stock.
175	"	do	1 x 12 "
11	"	do	2 x 10 "
20	"	do	2 x 12 "
140	"	do	1 inch Siding.
20	"	do	1½ "
40	"	do	2 x 10 Joists.
16	"	Cedar,	3 x 6 "
19	"	Basswood,	1½ inch.

APPLY AT THE OFFICE, L20
WELLINGTON STREET, OTTAWA.

THE MART
BY F. W. COATE & CO.
SALE OF VALUABLE
Timber Limits
Near Lake Nipissing.
The subscribers have received instructions to sell by Public Auction, WITHOUT RESERVE, at the Mart, 57 King St. East, in the City of Toronto, on
Wednesday, 5th Oct. Next
The Valuable Timber Limits situated near Lake Nipissing, and designated as Berths Nos. 29, 30 and 38 containing 36 square miles each.
The outlet from these limits is by the Bueve River, which runs centrally through a large section of them, affording first-rate facilities for running timber or logs into Lake Nipissing.
By recent survey of two lines and ranging a portion of them, they are known to contain a large quantity of excellent White and Red Pine, represented to be quite equal, if not superior, in quantity and quality to any in the entire district; a considerable portion of it being in close proximity to the river, growing on good even surface and can be easily worked.
The Limits have not been worked, and will be sold to purchasers in separate lots as they are designated and on liberal terms, which will be stated at time of sale. Sale to commence at 12 o'clock.
F. W. COATE & Co.,
2L22 Auctioneers

Flexible Board Rules,
With Steel Head, either Cleveland or London make, at $1.75 Each.
GEORGE STETHEM,
PETERBOROUGH, L16

Market Reports.

LONDON, ONT.

From Our Own Correspondent.

SEPTEMBER 23.—"It never rains but it pours" is an old saying, and as a fulfilment of the old time assertion, we have had no less than two mill fires here since my last letter.

On Sunday the 11th Sept. about 5 p. m. a fire broke out in the extensive planing mills of Thos. Green of this city, and before long it had developed into an immense conflagration. The fire commenced at the north end of the building, which is bounded by the G. W. R. track, and it is supposed was started by a spark from a passing engine. All the fire force was immediately at work, and kept the blaze from spreading as far as practicable. The building, however, soon became a total ruin, and the loss will fall heavily on Mr. T. Green. It is estimated at about $25,000, on which there was an insurance of $5,000 in the Commercial Union. Mr. H. C. Green's loss will be about $1,000, fully covered by insurance.

A few days ago an alarm was sounded indicating a fire at Wright & Durand's planing mill, but with the prompt response of the fire brigade it was soon extinguished, with very trifling loss.

The meeting of creditors of G. C. Hargreaves was adjourned, one creditor standing out against the offer made. This creditor has, I understand, garnisheed an amount coming to the insolvent estate which will give him about two-thirds of his claim. Mr. Hargreaves' first offer has been augmented by a better offer than he made at the first meeting, and it is generally being accepted, and the firm will likely go on again.

The market has not been so brisk for the past two weeks, as suggested in my last letter, though there is a steady business doing.

The Provincial Exhibition is now in full blast, and there is consequently a temporary suspension.

No fresh contracts of any account have been made. The last contract for laying the block pavement will likely be given out again, and fresh tenders will be solicited.

Below I append price list:—

QUOTATIONS.

Mill cull boards and scantling	$10 00
Shipping cull boards, promiscuous widths	11 00
" " 10 and 12 in. stocks	11 50
Common boards, promiscuous widths	13 00
Scantling and joist, up to 16 ft	14 00
" " " 18 ft	14 50
" " " 20 ft	15 50
" " " 22 ft	16 50
" " " 24 ft	18 00
Common stocks	14 00
Common 2 in. plank	13 00
Cutting up plank and boards	18 00
Sound dressing stocks	17 00
Clear and picks	31 00
Three uppers, Am. inspection	35 00
¼ inch dressed and matched flooring	20 00
¼ " " " "	20 00
1 " " " "	20 00
XXX sawn shingles, ℔ M	3 00
Lath per 1000 feet	4 00

TORONTO.

From Our Own Correspondent.

SEPTEMBER 23.—There is not much that is new here in lumber matters to record. Shipments of lumber, lath and shingles from the north to this city continue brisk, and the lumber flats on H. & N. W. R. are continually employed, and many more could be profitably used if at the command of shippers. The company are receiving new cars from the Ontario Car Co., London, every few days, but the increase in numbers has not as yet been sensibly felt. The number of car loads of lumber, shingles, lath and cedar posts arriving daily foots up some seventy-five or eighty, and under the increased freight tariff the railway company must be netting something quite handsome; and most of this advance doubtless comes out of the middlemen, as up to the time of writing there has been no advance in prices on the local market, and most certainly the prices at which dimension stuff is sold on cars here afford no margin of profit to any one. There is no sound reason why bill stuff cut to order should not produce to the manufacturers and middlemen at least one dollar per thousand above present prices, and it remains entirely with the mill men to say whether such shall be the case or not. The rates at which short dimension stuff is now selling by car load leave the manufacturer about $6.50 per M. at the mill door, and it is a sheer waste of lumber and time to try and produce bill stuff at any such prices. Of course the answer is, if all the rest are willing to demand an advance, well and good, and this is just where the rub comes in. Each man, or firm, runs on the go-as-you-please system. Want of organization is at the bottom of the whole trouble. The pine continues to be slaughtered, and some one other than the manufacturer derives the benefit. The fire fiend steps in and helps on the demolition of our pine forests, and the time is not far distant when it will become a serious question where we shall obtain our supply from. No doubt many will laugh at this idea, but it is not so hard to calculate how long our pine forests will stand the present drain, and the end is much nearer than many may suppose.

You will notice that shingles have not held the advance formerly noted, and mainly through the action of one retailer who happened to have made a favorable contract last season for a quantity to be delivered during the present year, and who is too modest to demand more than a living profit, therefore other retailers conclude that they must follow suit, even if they do business for nothing. The retail yards here held fair stocks, except in joisting, which is scarce; and when we take into account the number of mills lately destroyed by fire, and the numbers engaged in cutting stock boards where formerly bill stuff was cut, it is hard to see how the yards can hope to obtain a full supply of the latter. The quantity of lumber now being consumed in Toronto is far in advance of anything before known, and if retailers fail to reap their harvest while they have the chance, they will have only themselves to blame for it.

Shipments over the dock are brisker than at any other time during this season. Cars are unloaded here promptly, and there is no great accumulation of lumber on the docks, so that if nothing occurs to mar the present calculations, the remainder of the navigable season will be a busy one, and it seems probable that lighter stocks will remain on hand at the close of navigation than at any time during the last several years; and should the ensuing winter prove favorable for logging purposes, there will doubtless be large stocks got in, as much of the timber over which the fire has run will have to be cut or it will be useless after the next season has passed over.

QUOTATIONS.

Mill cull boards and scantling	$ 9 00
Shipping cull boards, promiscuous widths	12 00
" stocks	13 00
Scantling and joist, up to 16 ft	12 00
" " " 18 ft	12 00
" " " 20 ft	12 50
" " " 22 ft	13 00
" " " 24 ft	13 50
" " " 26 ft	14 50
" " " 28 ft	15 50
" " " 30 ft	17 00
" " " 32 ft	18 00
" " " 34 ft	20 00
" " " 36 ft	22 00
" " " 38 ft	25 00
" " " 40 to 44 ft	30 00
Cutting up planks to dry	18 00
" boards "	16 00
Sound dressing stocks	15 00
Picks Am. inspection	26 00
Three uppers, Am. inspection	34 00
1½-inch flooring, dressed	28 00
1¼ " " rough	14 00
1¼ " " dressed	24 00
1¼ " " undressed	14 00
1 " " dressed	20 00
1 " " undressed	15 00
⅞ Beaded Sheeting, dressed	20 00
Clapboarding, dressed	12 50
XXX sawn shingles, ℔ M	3 00
XX sawn shingles	2 80
Sawn Lath	1 60

OTTAWA.

From Our Own Correspondent.

SQUARE TIMBER.

SEPTEMBER 24.—The square timber trade has been booming this season, and more has passed down the Ottawa valley to the Quebec market than for quite a number of years past. The returns of the Chaudiere slides for the current year shows the following:—

	Cribs.	Pieces.
Square Timber	6,213	162,843
Round Piles	254	5,213
Flatted Timber	83	2,356
Dimension	31	.....
Spars	4	80
Totals	6,585	170,492

The returns for last year shows 3,441 cribs as having passed through with 82,814 pieces. Take the cut of square timber alone, more than double the quantity must have been taken out last winter than the previous one, for quite a number of rafts are laid up on the Upper Ottawa until next spring. In addition to this, 10,000 pieces are being brought down by rail for the British Canadian Company. A train of seventeen car loads per day have been passing this point for four weeks past, and will continue to do so for four weeks to come, in order to complete the contract entered into between the railway and the company. There are three rafts of square timber belonging to David Moore, and two owned by Latour, laid up above the Des Joachims.

CLEARANCES GRANTED.

During the present season 121 clearances for square timber, etc., have been granted at the Crown Timber office in this city—95 for timber cut on the Ontario side of the Ottawa valley, and 26 for the Quebec side. Clearances for the latter section do not extend below the Blanche river, about twelve miles below this point. The following shows the number of clearances granted to some of the leading lumbermen of the valley:—

Four clearances—J. R. Booth, B. Caldwell & Son, Richard White.

Three clearances—McLachlin Bros., William Mackey.

Two clearances—Barnet & McKay, Lambert & Conroy, David Moore, R. & W. Conroy, R. Campbell & Son, Thistle & Egan, Archie McLean, Jonathan Fraser & Co., McCoshen & Fraser, John Fraser, O. Latour, J. & B. Bryson, George A. Grier, C. & W. Mohr, A. & P. White, R. Campbell & Son, Alex. Fraser, J. B. Dickson.

Single clearances—Levi Young, R. Nagle, Gilmour & Co., W. C. Edwards & Co., Allan Grant, Wm. Powley, Gillies Bros., R. H. Klock, Alex. Mackey, Bell & Hicky, J. & B. Grier, etc.

RAILWAY TIES.

Mr. Hebron Harris, of this city, has been shipping a great quantity of railway ties this season, from the Gatineau. The official exhibit sheet shows as follows:—

May	4,115
June	11,269
July	15,137
August	16,386
September	8,320

In addition to the above there are 4,000 more to come down, about that number being stuck a few miles up the river, the water being very low. This will give a total of 59,227 ties cut on the Gatineau last winter. The ties are shipped to Cape Vincent and to Kingston for the railways.

THE LOG DRIVES.

Considerable difficulty is being experienced in getting the log drives of the Upper Ottawa down, owing to low water, but the mills are kept partially busy, a good many men being employed in running the logs through the Chats and Deschenes.

The final sweep on the Gatineau has been abandoned above Chelsea, about four miles from the mouth of the river. Forty thousand logs are stuck. Ex-Ald. Bingham, who manages the Gatineau drive, says that such a thing never occurred before for sixteen years.

LUMBER QUOTATIONS.

There are no changes to note in the matter of lumber. Sales have been steady at firm prices. The following are the quotations:—

10-inch stocks, with shipping culls and better per M	$14 00@15 00
12-inch stocks, with culls	18 00
12-inch stocks, without culls	22 00
Sidings, best qualities	25 00@30 00
Sidings, 1-inch kind	25 00
Lath	1 00

FREIGHTS.

The freightage business is dull at present, a number of barges being laid up owing to the difficulty experienced in getting through on account of low water. A good deal of shoal-dodging has to be done on the Ottawa at some points. The river is over twenty feet lower than at its high water level in the spring. There is no change in freight rates, as shipping is not extra active at present, producers declining to make any large sales.

EDGINGS.

Some fifteen or twenty men are busy blasting a channel at the Remieux rapids, just above which there are some 300,000 logs which cannot otherwise be got down until the water rises.

All the saw mills in this locality have been running more or less irregularly for some time, and a number have been shut down for days at a time. The closing of Bronson & Weston's mills alone throws three hnndred hands idle.

By the bush fires the depot of Mr. J. R. Booth, on the Madawaska, was destroyed, with considerable provisions.

Gilmour & Co., of Hull, Q., have purchased two small locomotive engines for the purpose of shunting around loaded tramway cars in their extensive yards. The engines are to take the place of horses. They were made by Gilbert & Co.

Large numbers of shantymen are daily being sent up the river. The wages range from $18 to $30 a month, according to the work to be performed. A gang of one hundred men was recently sent to Waubaushene, having been hired to work for the Georgian Bay Lumbering Co.

A barge got stuck in the Chute au Blondeau, Grace's Point, a short time ago, and it was found necessary to destroy the vessel in order to clear the channel and improve navigation.

ST. JOHN, N. B.

From Our Own Correspondent.

DEALS.

SEPTEMBER 21.—The most prominent feature of the deal trade for the moment is the striving among the ships in port to complete their loading on or before the first of October, in order to secure their deck loads, which they will not be allowed to clear with after that date. The stock of deals is extremely light, and there are but few deals coming into the market for sale, so that the prospect, in some cases, of ships securing their deck loads in time is rather uncertain.

The stock of deals here, at the commencement of last winter was less than had been the case for many years, but from present appearances, it is likely to be still less at the close of the present season. Under these circumstances, with improving markets in Great Britain, the fall operations are likely to be fairly profitable.

FREIGHTS.

Owing to the moderate deal supply and the push in loading the vessels now in port, as already referred to, there has been little demand for tonnage, and rates have slightly declined in consequence. We quote 55s. as about the market rate for Liverpool, &c.

VESSELS IN PORT.

The following is a list of the vessels in port, with their tonnage and destinations:—

John Murphy, 1479, Liverpool,
Missouri, 818, W. C. E.
Freeman Dennis, 808, Liverpool.
Antwerp, 573, Cork.
Ella, 332, Glasgow.
Nettie Murphy, 1373, Liverpool.
Minnie Burrill, 1465, Liverpool.
Herbert Beech, 1061, Liverpool.
Annie Burrill, 897, Bordeaux.
Anna P. Odell, 379, Glasgow.
St. Julien, 1049, Liverpool, Barrow or Bristol Channel.
Rothiemay, 1250, London.
Maggie M., 429, Bristol Channel.
W. E. Heard, 587, Waterford.
W. D. Wallet, 1413, repairing.
Galatea, 1400, Bristol Channel.
Romola, 298, ——
J. I. Smith, 1350, Liverpool.
Elizabeth Childs, 395, Bristol Channel.
Malville, 924, Melbourne.
Althea, 375, Yonghal.
Buda, 349, Dundalk.
Her Majesty, 1342, discharging.
Liffey, 845, ——
Dusty Miller, 595, ——
Bonito, 599, Mersey.
Stanley, 542, ——
Hawthorne, 621, ——
Windward, 607, discharging.
Eleanora, 1049, ——
Adept, 1102, waiting.

SHIPMENTS.

The shipments of deals and other sawn lumber are as follows:—

For Europe	9,782,000 Sup. feet.
" United States	2,527,060 "

From Another Correspondent.

SEPTEMBER 23.—The English market is still firm, and we are aware of one cargo, part of which was sold in Liverpool at £7, and the balance held for a higher price. The last quotations we have give £6 15s. to £7, but better prices have been realized. The market in Lon-

don for one staple is good, as we notice one sale of dimension lumber at £8 10s., and other transactions running from £6 to £7 5s.

The American market has, of course, been affected this week by the death of the President. We can quote spruce boards and plank in Boston at $12.50@14.50; laths, from $1.70@1.80, with fair demand for good dry stock. In New York laths have dropped, and recent sales have been made at $1.90.

Freights to transatlantic ports have varied the past week. We know of two charters for London, one at 58s. 9d., and one at 57s. 6.; also one at 60s. for Liverpool or Bristol Channel; and one at 59s., with the same choice of ports. Still another charter, is of a new character, say 57s. 6d., to any dock in the Mersey. Coastwise the freights have stiffened, and at this date we can quote for New York, $3.65; Sound ports, $3.25, and Boston, $2.75. Outside deals are scarce, and prices are merely nominal, $8.75 per M. being about the present rate. Logs also are hard to get, as those holding them are keeping them for their own use, and are not at all desirous of selling.

St. John, N. B., September 23rd, 1881.

ALBANY.

SEPTEMBER 22.—The *Argus* says the trade in the district since our last report has been very fair, and several large sales of box have been made. Inquiries are being received by rail from many of the poins of consumption, giving indications of a very active fall trade. The disastrous fire at Oswego, last week, by which eight to ten million feet of lumber were burned, is going to cut the supply still further short. A good deal of this lumber, we understand, was sold to be delivered in New York, and as the season is getting short, it will be hard for the dealers to replace their stocks.

The receipts of lumber by lake at Buffalo for the week ending Sept. 20th were 7,363,400 feet and by rail — cars. The receipts by lake at Oswego for the week were 3,317,900 feet.

The receipts by canal at Albany from the opening of navigation to the 15th Sept. were:—

	Bds. & Sctl.,ft.	Shingles,m.	Timber,ft.	Staves,lbs.
1881	279,770,000	2,110	1,000	6,105,000
1880	258,800,400	2,693	5,400	257,000

Freights from Bay City to Buffalo and Tonawanda, $2,75 ₱ M.; from Saginaw, $3,00. From Tonawanda to Albany, $2,25. From Oswego to Albany, $1.50@1.60. An advance in Ottawa freights is shortly expected. From Ottawa to Albany, by boats, $3 @ M. feet.

River freights are steady:

To New York, ₱ M ft	$ @1 00
To Bridgeport	@1 37½
To New Haven	@1 37½
To Providence, Fall River and Newport	2 00@2 25
To Pawtucket	2 25@2 50
To Norwalk	1 25@1 30
To Hartford	@2 00
To Norwich	@2 00
To Middletown	@1 75
To New London	@1 75
To Philadelphia	@2 00

Quotations at the yards are as follows:—

Pine, clear, ₱ M	$53 00@63 00
Pine, fourths	48 00@58 00
Pine, selects	43 00@53 00
Pine, good box	20 00@30 00
Pine, 10-in. plank, each	00 38@00 42
Pine, 10-in. plank, culls, each	00 00@00 22
Pine boards, 10-in.	00 26@28 00
Pine, 10-in. boards, culls	00 18@00 19
Pine, 10-in. boards, 16 ft., ₱ M	25 00@30 00
Pine, 12-in. boards, 16 ft	25 00@30 00
Pine, 12-in. boards, 13 ft	28 00@30 00
Pine, 1¼ in. siding, select	00 00@42 00
Pine, 1¼-in. siding, common	16 00@19 00
Pine, 1-in. siding, select	40 00@42 00
Pine, inch siding, common	16 00@19 00
Spruce, boards, each	00 00@00 16
Spruce, plank, 1¼-in., each	00 00@00 20
Spruce, plank, 2-in., each	00 00@00 30
Spruce, wall strips, each	00 11@00 12
Hemlock, boards, each	00 00@00 13
Hemlock, joist, 4x6, each	00 00@00 31
Hemlock, joist, 2½x4, each	00 00@00 13
Hemlock, wall strips, 2x4, each	00 00@00 10
Ash, good, ₱ M	38 00@45 00
Ash, second quality, ₱ M	25 00@30 00
Cherry, good, ₱ M	60 00@70 00
Cherry, common, ₱ M	25 00@35 00
Oak, good, ₱ M	38 00@43 00
Oak, second quality, ₱ M	20 00@25 00
Basswood, ₱ M	25 00@28 00
Hickory, ₱ M	36 00@40 00
Maple, Canada, ₱ M	26 00@30 00
Maple, American, per M	25 00@28 00
Chestnut, ₱ M	35 00@40 00
Shingles, shaved, pine, ₱ M	0 00@ 6 25
" 2nd quality	0 00@ 5 00
" extra, sawed, pine	0 00@ 4 40
" clear, "	0 00@ 3 30
" cedar, mixed	0 00@ 3 25
" cedar XXX	0 00@ 4 00
" hemlock	0 00@ 2 25
Lath, hemlock, ₱ M	0 00@1 62½
Lath, spruce, "	0 00@1 87½
Lath, pine, "	0 00@ 2 00

CHICAGO.

SEPTEMBER 21.—The condition of the cargo market of this city has presented few if any features of interest or change since our last report. The closing half of last week was marked with only fair offerings, which, in the main, were taken, as had previously been the case for some days, with reasonable alacrity, and with well maintained firmness on the part of all better descriptions of cargoes, whether of dimension sizes, or ordinary cut of lumber Piece stuff sold readily at $11 to $11.25 for good grades having a fair proportion of lengths above sixteen feet, $12.50 and $13 were not questioned on strictly long length cargoes.

CARGO QUOTATIONS.

Joist and scantling, green, ordinary lengths	$10 75@11 25
Joist and scantling, green, 20 feet and over	12 00@15 00
Mill run, choice green	16 50@21 00
Mill run, medium, green	13 00@16 50
Mill run, common, "	11 00@13 00
Shingles, standard	2 68@ 2 70
Shingles, extra A	2 70@ 2 80
Lath	1 85@ 1 90

LAKE FREIGHTS.

Manistee	$2 12½@2 25
Muskegon	1 87½
Ludington	2 00 @2 12½
Grand Haven	1 87½
Menominee	2 25
Sturgeon Bay	2 12½@2 25
White Lake	1 87½
Ford River	2 12½@2 25

Receipts and shipments of lumber and shingles for the week ending September 21:

	RECEIPTS.		SHIPMENTS.	
	Lumber.	Shingles.	Lumber.	Shingles.
1881	59,701,000	26,870,000	48,336,000	28,920,000
1880	34,080,000	18,890,000	47,246,000	27,141,000

Receipts and shipments of lumber and shingles from January 1 to and including September 21:

	RECEIPTS.		SHIPMENTS.	
	Lumber.	Shingles.	Lumber.	Shingles.
1881.	1,285,092,000	559,609,000	1,282,476,000	557,020,000
1880.	1,079,938,000	462,774,000	1,035,554,000	488,582,000
In...	215,054,000	97,462,000	236,922,000	68,438,000

BOSTON.

The *Journal of Commerce* of Sept. 24th says that business continues to keep very steady from week to week; while orders coming in are larger than for some time. Fine grades are rather low in the yards, owing to the marked preference on the part of buyers for this class of lumber. Mediums and randoms keep in good supply, and while the demand is only fair, enough is being consumed to hold values pretty steady. Western lumber is quoted about us, before, but it is not improbable that on finer grades an advance may be made owing to the large forest fires which dersroyed some excellent timber districts. Moreover, prices at western depots have been in advance of our quotations for some time so that dealers have been expecting a rise here ere this. Hardwoods continue in good demand, with sales equal to the supply in almost every department. The following are carload quotations.

CANADA PINE.

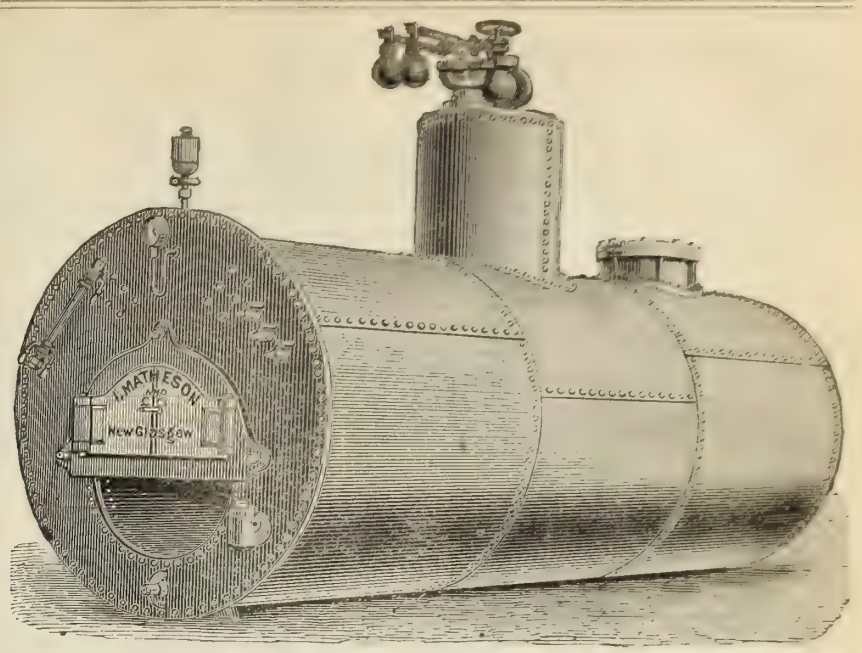
Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
" " 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

OSWEGO, N.Y.

SEPTEMBER 17.—The following are the quotations:—

Three uppers	$42 00@45 00
Pickings	32 00@35 00
Fine, common	20 00@25 00
Common	14 00@18 00
Culls	11 00@13 00
Mill run lots	17 00@22 00
Sidings, selected, 1 inch	30 00@33 00
1¼ inch	30 00@37 00
Mill run, 1x10, 13 to 16 feet	16 00@20 00
selected	20 00@25 00
shippers	15 00@16 00
Strips, 1 and 1¼ inch mill run	14 00@18 00
Culls, selected	22 00@30 00
Culls	10 00@13 20
1x6 selected for clapboards	25 00@40 00
Shingles, XXX, 18 inch, pine	3 75@ 3 85
XX, " "	2 75@ 2 85
XXX, 18 inch, cedar	3 00@ 3 20
XX, " "	2 25@ 2 40
Lath	1 40@ 1 60

Since the fire, market has been firm and demand good, dealers are hardly able to supply the demand for want of an assortment which is very much broken. Prospects look towards a good fall trade. Customers in many instances are obliged to go to Buffalo and Saginaw to supply their wants.



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Northey's Steam Pump Works

BOILER FEED PUMPS, AIR AND CIRCULATING PUMPS, STEAM FIRE PUMPS, and WRECKING PUMPS.

MINING PUMPS, PUMPS SPECIALLY ADAPTED for OIL PIPE LINES, And CITY WATER WORKS.

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MILL SUPPLIES.

Extra Stretched and Patent Smooth Surface

RUBBER BELTING—in Stock, 2, 3, 4, 5, and 6 Plies.
HOYT'S CELEBRATED LEATHER BELTING.
COTTON BELTING, for Flour Mills. &c., Superior Quality.

DISSTON'S CELEBRATED MILL SAWS.

Steam Packing of all kinds, Rubber and Linen Hose, Silk Bolting Cloth, Emery Wheels, Lacing Leather (Page's Genuine), Lard, Seal, Cylinder, Spindle, West Virginia and Wool Oils. Our Stock includes Mill Supplies and Rubber Goods of all kinds. ☞Quotations furnished for any part of Canada. 21

ESTEY, ALLWOOD & CO., SAINT JOHN, NEW BRUNSWICK.

ROBERT W. LOWE,
AUCTIONEER AND COMMISSION MERCHANT,
81 SANDS BUILDING, PRINCE WILLIAM STREET.

Cash advanced on Goods put in for sale. ☞No Storage charged. All kinds of Merchandise Bought and Sold. New and Second-hand Furniture always on hand. Agent for Hazelhurst & Co's WINTHROP COOKING RANGES, WATERLOO WOOD STOVES, FRANKLIN, &c., &c., &c.

L22-1y SAINT JOHN, NEW BRUNSWICK.

GREAT FIRE AT OSWEGO.

OSWEGO, Sept. 16.—Fire broke out to-day in a block of about ten or twelve tenements, at the foot of Water street, which were soon consumed, the wind being in the south. The flames spread to the lumber yards of C. H. Getmann, Bond and Jenkins and also about 3,000,000 feet of lumber were burned. The fire then spread to the lumber yasds of Kenyon, White & Co., E. W. Rathbun & Co., and Page, Fairchild & Co. The former contained about 2,500,000 feet and the latter about 3,000,000 feet. The indications are that 8,000,000 or 10,000,000 feet of lumber will be burned. The total loss on lumber, buildings, and docks will reach $400,000; partly insured.

Beautifiers.

Ladies, you cannot make fair skin, rosy cheeks and sparkling eyes with all the cosmetics of France, or beautifiers of the world, while in poor health, and nothing will give you such good health, strength, buoyant spirits and beauty as Hop Bitters. A trial is certain proof.—*Telegraph.*

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ELECTRICIAN,

4 QUEEN STREET EAST, TORONTO, ONTARIO.

Trusses for HERNIA, Rupture,

The most Durable and Beneficial kind known to Medical Science always in Stock, and fitted to the Body at Reasonable Prices.

BATTERIES FOR BATHS,

Of Special Sizes, made to order, both for Public and Private Use; and FARADIC BATTERIES always on hand. PRICES LOW. 1yL17

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Manufacturers of

LEATHER BELTING

Fire-Engine HOSE,

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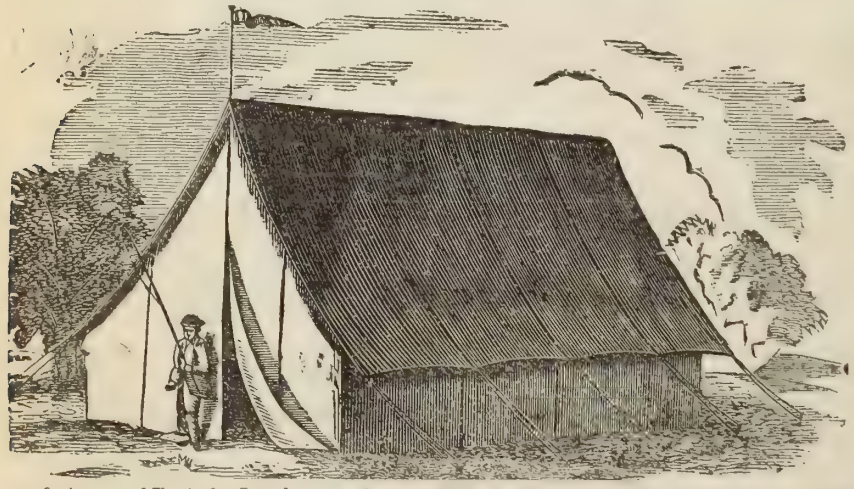
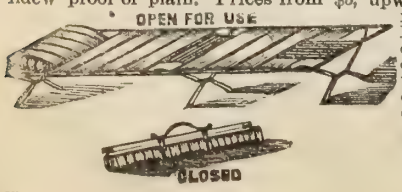


anufacturers of Tents for Lumbermen, Sportsmen, Camp Meetings, Photographers, Lawn and ilitary Encampments, with or without extra roofs, all sizes and styles, white or fancy striped, ildew proof or plain. Prices from $5, upwards. Flags of all descriptions, (regulation sizes) made of the best of silk-finish bunting. CAMP BEDS (Bradley's Patent) the best bed ever invented; size when folded 2 x 6 in.; 3 feet long, weighing only 11 pounds, but strong enough to bear the weight of any man. Waterproof wagon and horse-covers, tarpaulins sheets, coats and leggings of every description made to order on the premises. Special rates to Lumbermen. Send for catalogue and price list to



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The Best Axes in the World!

Single, Double and Triple Steel, 28 Patterns.

Warranted Good or Exchanged.

And Burrell's, Warnock's, and Dundas Axes, made specially for the Lumber Trade, repacked any weights without extra charge. Lindsay Pattern of Broad anfl Blocking Axes. LANCE TOOTH SAWS, warranted good. P. Jewill & Sons (Hartford, Conn.) LEATHER BELTING. CUT FILES. LATH YARN. Mill and Shanty Hardware. No. 1 LARD OIL. Heavy HAMES, BUCKLES and HARNESS TRIMMINGS. Ballard and other RIFLES, from $10 each. Large assortment of CARTRIDGES.

GEORGE STETHEM, Peterborough, Ont.

Importer, Jobber and Retail Dealer in Hardware. 12L17

Wrought Iron Shanty Cook Stoves

The Best Article ever offered to the Trade.

I have much pleasure in drawing attention to my **WROUGHT IRON COOKING STOVE, for Shanty, Hotel and Boarding House use.** These Stoves are made of **Heavy Sheet Iron,** the top and lining of the fire-box being of **Heauy Cast Metal** and all the connecting parts of substantial **Wrought Iron Work.** The dimensions of these Stoves are as follows:—

SINGLE OVEN STOVE

Top surface contains six 10-inch holes, with ample room between, and one oven 16 x 24 x 26.

DOUBLE OVEN STOVE

The Double Oven has a top surface containing twelve 10-inch pot holes, with two ovens, each 16 x 24 x 26. One fire-box of suitable size for area to be heated. Below will be found Testimonials from some of the leading Lumbermen, who have used my Wrought Iron Cook Stoves since I ommenced manufacturing them. They are the names of gentlemen who are well known and eliable, and will carry more weight than any recommendation of my own could do.

The Best Stove I have ever Used.

PETERBOROUGH, May 31, 1880.

ADAM HALL, Esq., Peterborough. Dear Sir,—I have used your Wrought Iron Cooking Stove in our lumbering operations since its introduction here, and have no hesitation in saying that I prefer it to any other. For durability, economy and efficiency, where a large number of men are employed, it is the best stove I have ever used. You can, with confidence, offer it to hotels, boarding houses and lumbermen.

Yours truly, THOS. GEO. HAZLITT.

The Stove for Lumbermen.

PETERBOROUGH, June 1st, 1880.

ADAM HALL, Esq., Peterborough. My Dear Sir,—We have used your Wrought Iron Cooking Stove and find it is very satisfactory for lumber operations, especially so on drives. We can recommend it highly.

Yours truly, IRWIN & BOYD,

Gives the Greatest Satisfaction.

PETERBOROUGH, June 3rd, 1880.

A. HALL, Peterborough. Dear Sir,—I have had the Wrought Iron Cook Stove, purchased from you, in constant use ever since last fall, and it gives the greatest satisfaction in every respect. I can recommend them highly to any one who is in the lumber business. Very truly yours, GEO. HILLIARD, M.P.

EVERY STOVE GUARANTEED

All the necessary TINWARE and CUTLERY for Shanties suppied at the Lowest Prices.

ADAM HALL, Peterborough.

HART EMERY WHEEL COMPANY, Limited

HAMILTON, CANADA.

GILBERT HART, Detroit, President.
JAMES T. BARNARD, Hamilton, Secretary-Treasurer.
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EMERY and CORUNDUM WHEELS

These Wheels are Wire Strengthened

And Specially Adapted For Saw Gumming

Neither Animal nor Vegetable Glue or Gum being used in their composition, they are NOT LIABLE TO HEAT, and give out no Odors, while

They Surpass All Other Wheels for Free Cutting and Durability.

We refer to the following well known Saw Manufacturers for Opinions as to the Quality of our Wheels :

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JAMES ROBERTSON, ESQ.,
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Messrs. JAMES ROBERTSON & CO.,
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WE ALSO REFER TO

WILLIAM HAMILTON, ESQ.,
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Manufacturer of the Covell Saw Sharpeners.

Messrs. H. B. RATHBUN & SON,
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Lumber Merchants.

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We will supply anything in the line of BLANKS or STATIONERY for Lumber Shanties and Offices at City prices.

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All Printing done in the Highest Style of the Art, and at Lowest Living Prices.

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Account Books Ruled and Bound to any desired Pattern.

For Schedule of Prices address, describing the kind and quality of work desired,

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Cast Steel Table Cutlery!

Best Cast Steel, Warranted.

Edge Tool & Cutlery Works, Woodstock, N.B.

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Awarded Diploma and Medal by the New Brunswick Government in 1873.

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At Toronto Industrial Exhibition, 1st Prize, Diploma & Medal for Best Square Piano
At Hamilton Provincial Exhibition - - - - - - - 1st Prize and Diploma
At Brantford Southern Fair - - - - - - - - - 1st Prize and Diploma
At Guelph Central Exhibition - - - - - - - - - 1st Prize and Diploma

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The Bell Organs have just received the HIGHEST AWARD and SPECIAL PRIZE (Gold Medal) at the International Exhibition, Sydney, Australia, this year for their Organs over all the English and American makers. This, along with the unlimited awards, prove that

THE BELL ORGANS LEAD THE WORLD.

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Medal and Diploma.....Provincial Exhibition 1871
Medal and Diploma.....Centennial Exhibition, 1876
International Medal and Diploma, Sydney, Australia, 1877

WE RECEIVED

Only Medal for Parlor Organ, Provincial Exhibition, 1878
Only Medal for Parlor Organ, Industrial Exhibition, 1879
And Gold Medal.....at Sydney, Australia, 1880

The Bell Organ Manufactory is the Largest and Oldest in the British Empire, and the fact that we have sold nearly 15,000 proves that they are the best in the market. We GUARANTEE ALL OUR ORGANS for five years. Correspondence invited. Illustrated Catologue mailed free.

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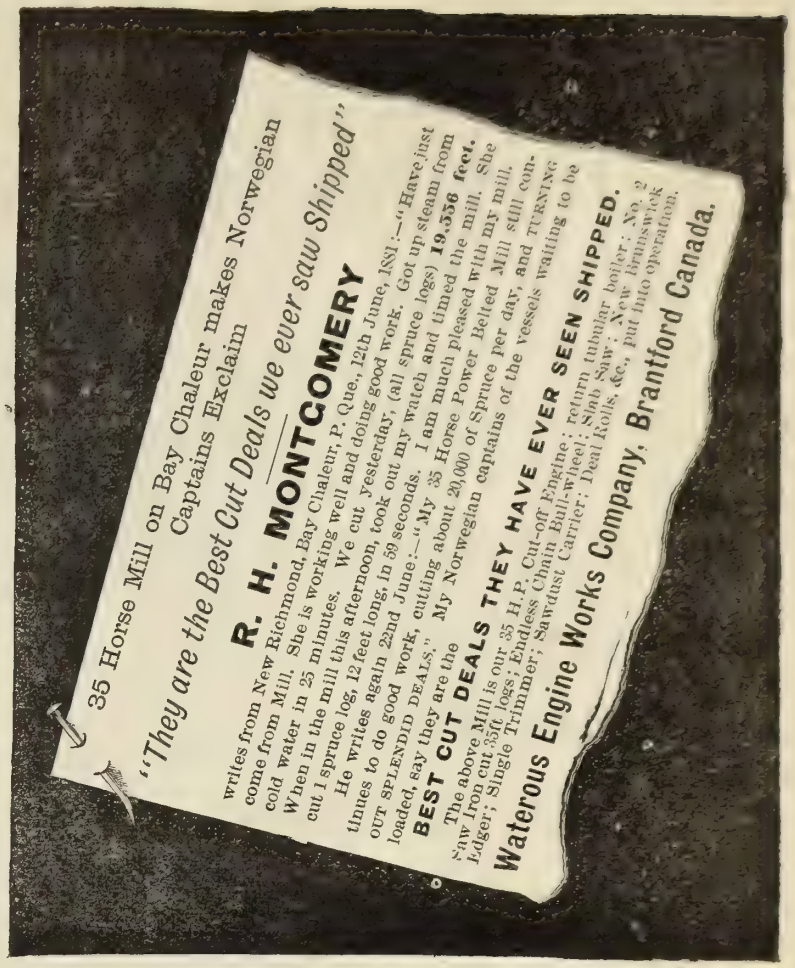

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Will always find a Large Stock of

Shanty Blankets

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HORSE BLANKETS

At LOWEST Mill Price, at

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Send Sample Order for our LINED SHAPED HORSE RUG, a Specialty, highly recommended for Wear and Warmth

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M. Covel's Latest Improved Automatic Saw Sharpener!

Is the Most Perfect Machine that has ever been Introduced into Mills for that purpose.

CIRCULAR SAW STEAM FEED!

I would also call special attention to my

Heavy Circular Saw Mills

and for STEAM MILLS, would recommend the Steam Feed, having put in several which are giving the best of satisfaction, as will be seen by the following testimonials:—

GRAVENHURST, August 20th, 1880.

WM. HAMILTON, ESQ., Peterborough.

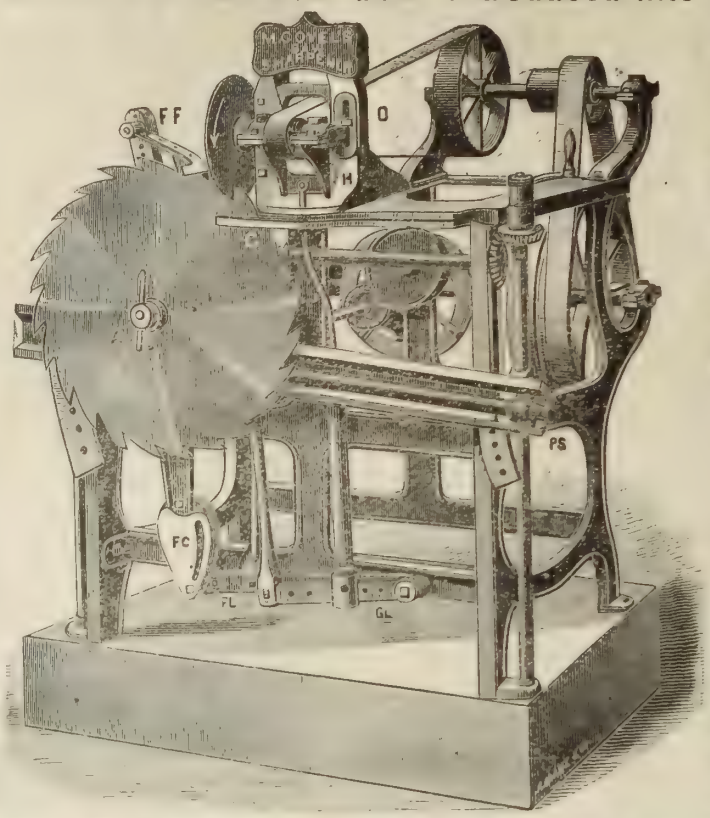
DEAR SIR—I have used your Steam Feed for near four months, and it has given me perfect satisfaction in every way; it is admitted by every person who has seen it work to be the best feed ever invented. Since I put it into my mill, I have not lost ten minutes time fixing anything belonging to it. I can cut 18 boards 13 ft. long in one minute. It can do much smoother and better work than the pinion feed. It is easily governed and reverses the carriages instantly. I am thoroughly satisfied with it and can recommend it to any person who has a Circular Saw Mill for cutting long or short logs. I consider I have cut more lumber than will pay for the Steam Feed since I got it than I would have cut had I not put it in.

Yours respectfully,
WILLIAM TAIT,
Lumberman, Gravenhurst.

TORONTO, August 11th, 1880.

WM. HAMILTON, Peterborough, Ont.

DEAR SIR—The Steam Feed you put in is working splendidly. Yours, &c.,
THOMPSON, SMITH & SON.

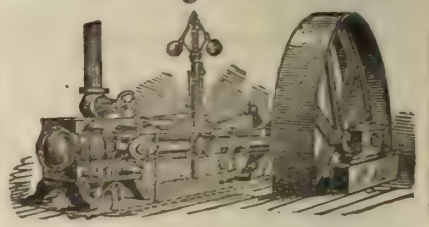


MILL MACHINERY!

I am also manufacturing Saw Mill Machinery, for all sizes of Gang or Circular Mills, Span or Double Circulars for Slabbing Small Logs. My Patent Jack Chain for drawing logs into Saw Mills, acknowledged by all to be the Cheapest and best ever got up; also, my Patent Lumber Markers, different sizes of Edgers, Gang Lath Mills, Trimmers, Power Gummers, and all Machinery used in a first class Gang or Circular Saw Mill; also, small Hand Gummers for use in the woods, for Cross-cut Saws. Rotary Pumps of different sizes, for Fire Protection in Mills, &c.

Horizontal Engines and Boilers

CORLISS ENGINES



Where economy of fuel is the great consideration, along with uniformity of speed, such as is required in Grist and Flouring Mills, Woollen and Cotton Factories, or large Factories of any kind, I supply the Corliss Engine. I feel justified in saying that our Style, Workmanship and Finish on this Engine will be no discredit to its renown, and certainly is not equalled in this country for economy of fuel. I have them working at 2½ pounds of coal per horse-power per hour. L10

WILLIAM HAMILTON,

PETERBOROUGH, ONT.

EMERY WHEELS FOR SAW GUMMING!

Solid Emery Wheels are now almost in universal use for the purpose of gulleting and gumming saws. Statistics show from 25,000 to 30,000 saw-mills in the United States. Many of these run only a single saw each. A one-saw mill would use one or two wheels a year, costing $3 to $4 each, and when such small mills order single Emery Wheels from the factory, the express charges often equal the cost of the wheel. There was a time when the quality of Emery Wheels was so uncertain, and the demand so fickle, that storekeepers could not afford to carry them in stock. Now, however, Saw Gumming Wheels have become as staple an article as Files, and every dealer in saws, Hardware and Mill Supplies can afford to carry a few dozen standard sizes in stock. Large dealers order stocks of $500 to $750 worth at a time. Saw Gumming Wheels are used with the edge (or face) square, round or beveled. Probably seven-eigths of all in use are beveled.

The principal sizes are:

8x¼, 8x⅜, 8x½ — ¼ in. hole.
10x¼, 10x⅜, 10x½, 10x⅝ — ¼ in. hole.
12x¼, 12x⅜, 12x½, 12x⅝, 12x¾, 12x⅞ — ¾, 1 and 1 inch.

Probably more wheels 12x⅜, 12x½ and 12x¾ are used than all the other sizes together. Saw Gumming Wheels are used, however, of all sizes up to 24x1½. The most frequent complaint is that Emery Wheels harden the saw so that a file won't touch it. The answer is that you don't want a file to touch it. An expert workman will shape and sharpen the teeth with an Emery Wheel, leaving the teeth *case hardened*, in which condition the saw will cut about 33⅓ per cent. more lumber than a soft saw will. Those who want to use the file, however, have only to touch the saw *lightly* a second time (after going all over it once), and this second touch will cut through the case-hardened scale.

A QUESTION OF QUALITY.

Thirteen years of experience as makers of, dealers in, and actual users of Emery Wheels, have led us to a decided opinion as to what quality is the best. We prefer for almost every use an "Extra Soft" wheel like the "Pocono." We believe that money lost through the rapid wear of the wheel is more than made up by the money saved on wages. As we cannot get every one to adopt our views, we make several qualities, so as to meet their views. We say to those who think they can only be satisfied with some other make of wheels (not Tanite), that we can furnish qualities *to match* any and every other make. If you have got used to some special quality of wheel, let us know what it is, and we can send you *a Tanite Wheel of similar quality*. Our *regular* classification of Saw Gumming Wheels is as follows:

CLASS 2. MEDIUM—HARD.—This Wheel is THE STANDARD Saw Gumming Wheel all over the world. Probably seven-eighths of all the Saw Gumming Wheels used are "Class 2." It cuts fast and keeps its shape well. Some think it too hard, some too soft. We prefer the "Pocono."

CLASS 3. MEDIUM—SOFT.—The same as to coarseness and fineness as "Class 2," but a *softer*, and therefor freer cutting wheel.

CLASS "POCONO." EXTRA SOFT.—This Wheel we prefer to all others. It is both *finer* in grain and softer than either of the above. As a Saw Gumming Wheel, Class "Pocono" is specially suited to those practical and experienced Sawyers who know how to grind with a light touch, and who want a free cutting wheel that will not create much heat.

Illustrated Circulars and Catalogue, showing Cuts of Saw Gumming Machines, and Shapes, Sizes and Prices of Wheels, sent free on application. L13

The Tanite Co. Stroudsburg, Monroe Co. Pennsylvania

CANADIAN TRADE SPECIALLY SOLICITED.

THE CANADA LUMBERMAN

AND MILLERS' MANUFACTURERS' AND MINERS GAZETTE.

PUBLISHED SEMI-MONTHLY.

The only Newspaper devoted to the Lumber and Timber Industries published in Canada.

SUBSCRIPTION $2.00 PER ANNUM.

VOL. 1. PETERBOROUGH, ONT., OCTOBER 15, 1881. NO. 24.

THE Hon. J. G. Joly has a large plantation of young walnut trees at Lotbinieer, Que., and he has sent to Sarnia for more walnuts to plant. His example is a good one.

SIR A. J. SMITH'S mill, on the Petitcodiac River, was burned on Friday night, the 9th of September. The origin of the fire is unknown. The mill was shut down that afternoon at three o'clock. Mr. Early Kay, the manager, left the mill premises at 5 p.m., at which time all was straight, and there was no sign of any fire in the vicinity then. Besides the destruction of the mill, valued at over $2,000, there were over 300,000 feet of sawed lumber burned; also a portion of a bridge across the stream near the mill. The loss is estimated at $3,000. Insurance, about $1,000. Mr. Kay has taken steps towards rebuilding the mill at once.

THE *Timber Trades Journal*, of Sept. 17, says:—Liverpool was as remarkable for its bare supplies of timber during the first week of this month as London for its superabundance. Only 24 ships with wood were reported in the former, and of these 15 were steamers, mostly with only part cargoes, and some with a very small part, too, such as 3,000 staves, or 400 or 500 planks (30 or 40 loads, perhaps). On the other hand London imported 94 complete cargoes by sailers, besides 42 by steamships, some of them full cargoes from the Baltic. Yet prices at Liverpool are not improving, and the stock is heavier than it was at this time last week, while that of London is only about three-fifths of what it was then.

A. C. Danner & Co., Mobile, Ala., shipped by *Lady Dufferin* for Liverpool, a while since, a cargo, consisting of 1,250,000 feet of lumber, deals and hewed timber. The first direct shipment to Europe from this port was made several years ago by H. C. Vaughan, at present the superintendent of the mill of the firm named above, and consisted of hewed timber. This firm averages a cut of 800,000 feet monthly, and ships about 600,000 feet. The timber is brought to their mills from a radius of nearly 120 miles, and floated down the Dog and Pascagoula rivers, Mississippi, and several creeks. As it has to be brought many miles above the reach of tide water, considerable difficulty is anticipated in the future floating of rafts, which even now can only be done in a certain season of the year. As the timber men go more inland to cut, the work of bringing the logs to the rivers and creeks becomes more arduous and expensive. Tram ways are much needed which would carry the logs to tidewater, and thus afford a continuous and uninterrupted supply of material to the mills. There are at present ten mills in operation on the Dog and Pascagoula rivers. The timber is of fine quality and commands the highest price in the European markets.

SOME IRISH SAW MILLS.

Having a few hours' time to kill, while waiting for the homeward bound steamer at Londonderry, Ireland, the writer thought he could not employ them better than in a run through the saw mills, etc., which he noticed along the docks as he passed up them on the deck of the steamer, which had brought him thither from Glasgow. Although a very different thing from those of Canada, the saw mills to be seen at Londonderry are neither few nor without interest to a Canadian. Tney are, in fact, mills which take up the lumber, as turned out of our eastern mills, and fit it for actual use.

Londonderry is the chief point of supply for the North-Western district of Ireland, and imports each season about ten cargoes of deals from St. John, N.B.; three or four from other ports of N.B., and about three from Quebec, besides two or three cargoes of pitch pine. For the conversion of this and such timber as the neighbourhood produces into sizes and thicknesses suitable for the local trade, five saw mills, etc., are employed. We say "etc." because all of these mills do more or less of other wood work in addition to sawing.

While in Canada the first object is to save labour, in Londonderry the first object is to save the precious wood, and that they understand how to do this will be conceded when we state that we saw in the mills of Mr. Balantine a three inch deal cut into six boards, with the loss of only one quarter of an inch of the wood for the five saws which had passed through it,—that is just one-twentieth of an inch for each passage of the saw. In many respects the gates in which the saws are fixed for cutting deals are not unlike one of the ordinary gang gates to be found in any Canadian mill. They are, of course, all driven by steam, and work up and down in a gate, and the saws can be set to any thickness desired, in much the same way as our own. The frames in which they stand are, however, of massive iron, and are all set on the ground with a pit underneath, from whence the sawdust can be easily removed. Most of these gates are made for sawing two pieces of deals, or other small timber, at one time. In the mill of Messrs. Cook & Co. (you see they have "cooks" in the lumber business there as well as in Canada) they have a gate which cuts four deals at once, for which the "sawyer" claimed great superiority over all others in use in the city, and which, like all the rest of the machinery in these mills, had been brought across the Channel,—this particular one coming from the establishment of Thos. H. Allan, Johnstone, near Glasgow, while the others came from the works of T. Robinson & Son, Rochdale. Besides these "gates," all these mills had one or more ordinary circulars, for cutting up our square timber and the wood brought in from the surrounding country. It is a pity one half of the people of Canada cannot see for themselves the kind of Irish timber the writer saw in these mill yards, and in the course of manufacture. Nine-tenths of our people would consider it almost valuless for fuel, to say nothing of making use of it for manufacturing purposes, and yet here they were twisting and turning it about, and cutting it in this and then in that direction, until the refuse was almost reduced to nil. Seeing, they say, is believing, and one certainly requires to see for themselves the ingenuity displayed in the Old Country in making the most of a piece of the roughest wood, to appreciate in any degree the immense value which even our most inferior wood possesses under proper manipulation. As in too many other cases, it is to be feared our people will only appreciate the value of our forests when they are gone.

In addition to the sawing appliances found at the Messrs. McClelland's establishment, they were just getting into order, having been burnt out about two months before, an extensive shop for the manufacture of doors, sash, and woodwork generally. Already they had a few machines in operation, among them being what seemed to our unpractised eyes a very superior turning machine. Certainly no machine could do the work allotted to it more expeditiously or more neatly than this one did. They also had a new planing machine, which worked everything perfectly true (at right angles) from an inch up to 18 inches square. These machines, like all the others we saw (with the single exception already noted) were from the establishment of Messrs. Robinson, Rochdale, and were built, if not regardless of cost, certainly regardless of the quantity of iron put into them. In fact, as remarked to us, these machines were built to, and never did, wear out.

Mr. Balantine's is also a large establishment, with several ingenious machines for making mouldings, turning, etc., and the building trade must certainly be, as they said, fairly active in the North-west of Ireland, to give the full employment, which it seemed to be doing, to the establishments of Messrs. McClelland, Balantine and McAlwee. At Mr. Balantine's we came across an old friend from Deseronto, in the shape of some doors from the establishment of H. B. Rathbun & Son. Mr. Balintine says these doors give entire satisfaction, and that although there is a good deal of prejudice against them, yet they are destined to run the home-made article out of the market if the quality is kept up and they can continue to be sold at present prices. Upon this latter point, however, he seemed to be rather skeptical, and at the conclusion of a somewhat long conversation as to their merits, he said the only suggestion which he could make for their improvement would be that the panel should not be fitted so tight as it was, as the wood sometimes swelled after they came to hand to such an extent as to make the panel bulge. He attributed the swelling to their damper climate, and suggested that instead of being fitted tight up in the joints a vacancy of say an eighth of an inch should be left, so as to leave room for swelling. Doubtless the attention of Messrs. Rathbun only requires to be called to this point to ensure a remedy being applied, while we are sure every one will be rejoiced to learn from such a source of the success attending the enterprise of Messrs. Rathbun in sending this class of manufactures across the Atlantic.

THE FUTURE LUMBER SUPPLY.

The Ottawa *Free Press* says that regrets have often been expressed at the wholesale destruction of our pine forests by the lumbermen, but of late years the destruction of vast tracts of valuable timber by fire has led to the belief that it is better the timber should be cut than that it should be worse than wasted by annual conflagrations. In a former article we gave an estimate of the rate at which the forests are disappearing before the woodman's axe to supply the demands of the market, wherein it was shown that ten years was the limit at which the supply in the lumber regions of the North-Western States could be relied upon, while that of Canada could not be expected to last longer.

Should this forecast turn out correct, where are we to look for the future lumber supply of the world? An answer to this question is given in the accounts which reach us from the far west. From the mouth of the Columbia river extending north into British Columbia there are forests capable of supplying the prairies east of the Rocky Mountains with lumber for a great many years to come, and we fancy it is not improbable that, so soon as railway facilities are obtained from the Western Slope to the North-West territories, a great trade will arise. The lumber, coal, fish, etc., of the Pacific coast finding profitable exchange for the grain and meat of the territories.

The forests of British Columbia have a world wide fame. The timber consists chiefly of pine, with considerable quantities of fir, spruce, cedar and redwood, and a small supply of white oak, hemlock and maple. The trees of this region show luxuriant growth. The yellow fir frequently attains a height of 250 feet; pine, 125 to 160 feet; silver fir, 150 feet; white cedar, 100 feet; white oak, 70 feet; black spruce, 60 feet. Cedars have been found to measure 63 feet in girth, with a height of 120 feet. The pine trees are known to the lumbermen as of two varieties—"sap" and "overgrown." The "sap" tree yields 6,000 to 8,000 feet of lumber, and the "overgrown" 6,000 to 15,000 feet. Of this timber is made all grades of lumber—ship timbers, fencing, pickets, railroad ties, barrel staves and headings, household furniture, etc.—and the product is shipped in large quantities to the Pacific coast of South America, while trade is done with Australia, France and England.

OUR QUEBEC LETTER.

SCARCITY OF PINE IN THE MARKET—FEW TRANSACTIONS—THE ENQUIRY FOR OAK AND STAVES—THE SHIPMENT OF SQUARE TIMBER BY RAIL—LATEST QUOTATIONS—MINING NOTES.

From Our Own Correspondent.

QUEBEC, Oct. 6.—The past month has been a very uneventful one in the Quebec timber market. There have been but few transactions worthy of reporting, and not much change of prices, though in recent sales the prices of contracts, made a month or six weeks ago, have not been nearly touched.

WHITE PINE.

There is now remaining in first hands but a few small lots of white pine, and these are held by not more than two or three parties. There is still a moderate enquiry, but holders, of course, seek to improve the opportunity, and refuse to sell except at very high prices. Two or three weeks since a raft of white pine in shipping order, with some hardwood, changed hands at 26½ cents, while about the same time red pine of 44 feet, or thereabouts, was sold at 22½ cents. Last week the sales were as follows :—A raft of white pine, one of the choicest of the season, consisting of three-fourths square, 62 feet average, and one-fourth waney board, 22 inch average, at 37 cents all round ; another of 55 feet average, 28 cents. Square white pine, 45 feet average, fair quality, was sold last week for 28 cents. Within the last few days a raft of fair quality, about 52 feet average, has been sold at 26 cents, with half red pine, 38 feet average, at 17½ cents. A raft of white pine, 45 feet average, changed hands this week at 26½ cents.

RED PINE.

Red pine, as may be judged from the prices quoted above for mixed rafts, is not in much demand. Prime wood of large average would, however, command a fair sale. On the other hand a very large raft of poor quality has just been sold at 11 cents.

OAK.

Oak is still held firm with a fair enquiry. Prices have not materially changed since last quotations. Two or three sales have been made for early delivery by first rafts of next season. The figure is said to be about 49 cents.

STAVES.

Staves of all kinds are exceedingly scarce. No change in price is reported.

DEALS.

Deals are scarce and in demand, particularly spruce, which are much wanted. There is said to be little or no change since last sales, which were quoted some time since for spruce at 36, 28 and 22c. for large lots, and 40c., 26c. and 22c. for a small quantity.

FREIGHTS AND SHIPPING.

A few weeks will now end the shipping season here, and then we shall have the annual returns of stocks to winter here, which are certain, however, to be very light. The total number of vessels of all kinds in port to-day is but 35, and there are only a few more to arrive. Transactions in freights during the present week have been as follows :—London, timber 24s.; deals, 62s. 6d. Dublin, timber, 24s. Grangemouth, timber, 24s. Grimsby, deals, 65s.; timber, 35s.; deals, 80s.

COMPARATIVE STATEMENT.

The following comparative statement of timber, &c., measured and culled at Quebec, up to Oct. 7th, has been received from the Supervisor of Cullers' Office to-day :

	1879.	*1880.*	*1881.*
Waney White Pine.....	1,301,665	2,064,863	2,421,407
White Pine.....	2,503,375	3,874,801	5,455,785
Red Pine.....	741,499	954,884	1,872,004
Oak.....	793,593	1,419,196	2,534,881
Elm.....	318,074	922,530	1,009,440
Ash.....	47,161	236,672	394,039
Basswood.....	280	363	3,576
Butternut.....	70	645	2,991
Tamarac.....	6,691	22,458	24,416
Birch and Maple.....	121,224	561,815	151,742
Masts and Bowsprits...	50 pcs	4 pcs	25 pcs
Spars.....	26 pcs	23 pcs	
Std. Staves.....	76.9.0.8	17.4.0.6	368.7.2.29
W. I. Staves.....	127.3.0.11	299.6.1.2	355.4.2.20

SHIPMENT BY RAIL.

The shipment by the Q. M. O. & O. Railway, from above Ottawa, of Allan Grant's square timber, is progressing rapidly. Some 600 cars have already arrived, and 500 more are expected. The timber arrives in prime order, and is immediately dumped into a pond alongside the railway track, and there rafted and towed to the coves.

THE APPOINTMENT OF A SUPERVISOR.

The whole trade is very much excited about the vacancy in the Supervisor's Office, and the apparent determination of some few public men to pitchfork into the office some political favorite or hanger on, without the slightest knowledge of the requirements of the trade. Numerous representations, which it is to be hoped may not be overlooked, have been unanimously made by the whole trade to the Government, setting forth the importance and necessity of having a properly qualified Supervisor.

MINING NOTES.

A French engineer, sent out by Parisian capitalists, has just arrived here to investigate the mining value of the gold lands at Beauce, in the possession of the Quebec Mining Co. Should his report prove favorable, the necessary capital will at once be forthcoming. News from Buckingham is to the effect that operations upon the phosphate lands owned by the French Syndicate are to be at once pushed forward with vigor.

Effect of Removing Mountain Forests.

Attention has long been given to devising means to limit the ravages of these torrents, which ruin the land, threaten estates, destroy roads, and sometimes even compromise the existence of villages. Walls have been built along the banks to protect them, or across the streams to allay the force of these waters. The most efficacious means, however, as yet discovered, has been to maintain the woods on the slopes of the mountain. The effect of cutting away the trees in promoting the formation of torrents has not been doubted by the inhabitants of mountainous regions, and is clearly set forth by M. Surrell, who says:—"When we examine the tracts in the midst of which torrents of recent origin have been formed, we perceive that they have in all cases been despoiled of their trees and bushes. If, on the other hand, we examine hills whose sides have been recently stripped of wood, we observe that they are cut up by numerous torrents, which have evidently been formed very lately. Here is a remarkable double fact : wherever there are recent torrents there are no longer forests, and wherever the ground is cleared these torrents are formed ; and the same eyes that see the woods fall on the declivity of a mountain, may see appear there immediately a multitude of torrents."

The disastrous consequences of removing the woods from the Alps began to attract attention in the last century, and have since been discussed in many publications and official reports. In 1853 the prefect of the department of the Lower Alps said in a report to the Minister :—"If prompt and energetic measures are not taken, it will be almost impossible to designate the precise moment when the French Alps will become a desert. The period from 1851 to 1853 will produce a new diminution in the number of the popu ation. In 1862 the Minister will remark a continuous and progressive reduction in the number of hectares devoted to agriculture ; each year will aggravate the evil, and in a half century France will count more ruins and one department less." The departments of the Upper and Lower Alps actually lost thirty thousand inhabitants, or one-ninth of their population, between 1851 and 1876. A law for recovering the mountains with wood, which had been prepared by M. Forcade de Rouguet, director-general of the administration of the forests, was adopted by the legislative bodies in 1860, and was put in operation shortly afterward.—*Mr. M. J. Cleve, in the Popular Science Monthly.*

THE *Newcastle Chronicle* says a cargo of square timber chocks has been brought to the Tyne, *via* Hamburg, direct from Prince Bismarck's estate. The merchant who has received them says the wood is as hard and square as the owner of the estate himself.

Bogus Certificates.

It is no vile drugged stuff, pretending to be made of wonderful foreign roots, barks, &c., and puffed up by long bogus certificates of pretended miraculous cures, but a simple, pure, effective medicine, made of well known valuable remedies, that furnishes its own certificates by its cures. We refer to Hop Bitters, the purest and best of medicines.—*Republican.*

PEGS.

The New York *Mail* says :—It was the privilege of the writer to visit the picturesque little town of Arlington, Vt., which at the time boasted a population of 2,500, three churches, five stores, two hotels, an extensive car works, sash and blind, and chair factory ; also a "peg factory," which, by the courtesy of the foreman, Mr. L. E. White (who had been employed there twenty-nine years), he was shown through and received valuable information. The timber used is black and yellow birch, which is cut into pieces four feet in length, varying in diameter from eight to fourteen inches. These logs are placed in a building in winter and the frost extracted by steam. They are then run in on a tram railway to the circular saw department, and cut into slices or blanks of the thickness desired for the length of the pegs. These are sorted and the knots cut out, and are then passed on to a long bench which contains six machines composed of fluted rollers. The blanks are then run between these rollers, which creases both sides. They are then run through again to cross-crease, or mark out the exact sizes of the pegs. Then they go to the splitting machines, which are set with double knives, and cut the blanks into pegs. As they pass the last machine they are sorted, and all knots and discoloured ones removed as they are brushed off into large baskets. These machines are under the care of young women, who appeared much more happy and nseful than do many of those who, thumping at their piano, would consider such employment menial. The next process is bleaching, which is accomplished by the fumes of brimstone, which is unhealthy, (those who labor here shorten their lives). They are then placed in large cylinders, which hold eleven barrels, and have six hundred steam pipes running through them, and revolve one and one-half times to the minute, drying two charges per day to each cylinder. They are then passed into large wooden casks, or cylinders, which revolving rapidly, polish them by the friction, the refuse falling through wire sieves or screen openings, after which they are again passed into a sifter, which separates all the single pegs and drops them into tubs, or boxes, leaving those which have not been separated in the machine. They are then put in barrels ready for market. The factory running on full time turns out 150 bushels, or fifty barrels, per day. The sizes go from eight up to sixteen to an inch. The lengths go by eighths, two and one-half to twelve. Twenty-six hands are employed, half of them being women. The products of this factory are mostly shipped to Germany and France, and enter largely into the manufacture of toys and fancy goods, as well as into the shoe manufactory. Thus the "genii of mechanism" converts, as by magic, the trees from the Vermont mountains into articles of use, which, floating off through the channels of commerce to far away lands, anon return to sparkle the eyes of happy children in toys, in which these pegs have become important factors.

How to Come it Over Hornets.

Mr. James T. Bell's account, in the Canadian *Entomologist* of the easy capture of hornets may possibly serve as a useful hint to some agricul tural reader in an emergency. The nest was unexpectedly found in a stump during a walk in the Belleville forests : "A few days after, taking advantage of a cool morning, I sent my two boys to the woods with a small bottle of chloroform and a hard rubber syringe. Accordiug to directions, they injected about a drachm of the liquid into the hole, and threw a handkerchief over the entrance. In about five minutes they opened up the nest, when they found the inmates in a perfect state of slumber, and transferred them without trouble to their cyanide bottles. In about an hour they returned, bringing me forty-eight specimans of the insect."

ARE YOU ?—Are you a Dyspeptic? Have you Indigestion? Is your Liver sluggish? Does your food trouble you? Does sleep fail to refresh you? Is your appetite and energy gone? Zopesa (from Brazil) will cure you, tone you up, and invigorate your whole system. It is a gentle purgative, acts as a wonder upon, and gives strength and energy to the Digestive apparatus. It is strongly anti-billous, carries off all surplus bile, tones the Liver, gives sound Digestion and speedy health to the Dyspeptic and the Billious. Try a 10 cent sample at least.

Indian Forestry.

A correspondent of the New York *Tribune* in a lengthy article in which he gives a brief history of some of the forest fires that have visited this and other countries, sets forth some facts that are of peculiar interest in connection with the recent terrible conflagration that has visited our own state. He states that the Indians, as he found while living among them, made a practice of burning over the ground of their forests once a year, as regularly as the farmer plows his land. He claims that the heat from these annual burnings is not great enough to injure, much less consume the trees, but the flames clean the ground of dead leaves and rubbish, destroying bugs and worms and killing the germs of malaria. The accumulation of dry leaves, twigs, mosses and fallen timber, he thinks, is the cause of the great forest fires, such as those which have ravaged whole counties in this state and destroyed hundreds of human lives. If the woods were systematically burned every year in this Indian fashion, there could be no possibility of an accidental fire gathering headway enough to become a destructive conflagration. Some year of drouth, he fears, will see the Alleghanies and other timber strongholds swept as bare as the Tyrian rock. "Then the rainfall will cease, then the nation. History testifies that nations have perished from the earth when their forests perished." One remedy which occurs to this correspondent for the destruction of forests by fire and by the rapacity of lumbermen who cut down the trees but plant none in their stead to supply the coming generation, is the appointment of a national commissioner of forestry, "a man who knows and loves the life-giving wood, and who would travel from state to state, section to section, and forest to forest, protecting the timber lands of the country."—*Lumberman's Gazette.*

A Big Fire at Chandos.

A correspondent writes to the *Mail* as follows :—At dark on the evening of the 20th ult., the large lumber shanty in the north-east corner of Chandos caught from a forest fire, and was totally destroyed, also the stable, blacksmith shop, meat house, and granary. The office was saved by a sudden change of wind. The buildings were very extensive, the stable being 120 feet long, and the shanty (which last winter accommodated over 100 men) was 80 feet in length, and all very substantially built last fall by Mr. John Gault, an energetic foreman in the employ of Messrs. Gilmour & Co., Trenton, who expected to use the shanty for lumbering another winter or two. A near settler (with his wife and family of small children) occupied the premises as caretaker for the summer, and had his little summer's grain stored in the stable, and all burnt. He had done but little else for a month previously but watch, carry water, and fight fires in the woods around, and was beginning to hope the worst danger was past. But a strong northerly wind seemed sent on purpose to consume everything in its track, and earlier in the day reached and destroyed his own private dwelling, about forty rods from the lumber shanty. Himself and a few neighbours fought the fire so long at the big stable, and the shanty caught fire so soon afterwards, that a very few of the caretaker's household effects could be saved. To make matters more serious, his wife had given birth to a child the same day, and had to leave her bed and walk barefooted to the nearest house (nearly half a mile), supported by a neighbour and his wife.

Birch Bark Rubber.

It is said that a dense black gum may be obtained from the outer layers of the birch tree bark by distillation, which possess all the ordinary properties of gutta percha, and has the additional merit of resisting the deteriorating influence of air and the corrosive action of acids. This advantage makes it useful as an ingredient of India-rubber and gutta percha, which it renders much more durable. Whether these statements are true remains to be proved

Are You Going to Travel ?

Don't forget a supply of that Dr. Fowler's Extract of Wild Strawberry. It is a superior remedy for sea sickness, and a positive cure for all bowel complaints induced by bad water, change of diet, or of climate. Whether at home or abroad, it should be kept at hand in case of emergency.

VENNOR ON DECK.

Since Vennor's predictions of cold for this week has proved true his credit is up again in the eyes of the credulous. Therefore his predictions for the months to come are of interest. Paste them in the inner recesses of your hat :—

A warm wave is likely to occur over a large portion of North America during the month of November, 1881, and again during January and February, 1882.

A frigid wave may be expected towards the close of November and entry of December, 1881.

The winds and storms of March will probably arrive ahead of time, and render the closing days of February exceedingly disagreeable.

The latter part of April and entry of May, 1882, will remind one of winter again, and the spring is likely to be cold and backward generally.

The winter of 1882 is not likely to be characterized by heavy snow falls on this side of the Atlantic.

In Western Canada, and sections south of the lakes, navigation may remain open all the year, or close but for a very brief period.

December, 1881, will be a month of storms in the Lake Region.

The summer of 1882 will be generally unfavorable to agriculture, owing to cold and wet weather.

Western sections will probably suffer more from rains and floods than from thunder storms or cyclones during the summer of 1882.

There will be brief periods of severe cold during the winter of 1882, and longer ones of warmth.

Destructive Fire.

NEW YORK, Oct. 10.—The Fourth avenue horse car stables, owned by W. H. Vanderdeabilt, and occupying a block, were burned this evening. Most of the horses were taken out, but it is thought at least thirty perished. Some say two hundred were burned. The loss is estimated at $200,000. The flames spread to Morrell's large furniture storage building, across the street, which was destroyed. Some of the finest furniture in the city was stored there, including $50,000 worth of painting, the property of Vanderbilt, all which were burned. The loss is estimated at $2,000,000.

A VERY USEFUL KIND OF VARNISH is made known by Leon Vidal, which is excellent for producing imitation of ground glass, and will doubtless be found available for other purposes. The formula is: Sandarac, 13 parts; mastic; 4 parts; ether, 200 parts; benzol, 80 to 100 parts.

SEE TO IT?—Zopesa, (from Brazil) will cure the worst case of Dyspepsia. A single dose will relieve in a degree that shows its wonderful curative powers, and its peculiar action upon the Stomach and Digestive Organs. It is a positive and absolute cure for Costiveness and Constipation, acting in a remarkable way upon the system, carrying off impurities. As a Liver regulator its actions are most remarkable. It tones and stimulates the Liver to action, it corrects the acids and regulates the bowels. A few doses will surprise you. Sample bottle 10 cts.

Set back 42 Years.

"I was troubled for many years with Kidney Complaint, Gravel, etc.,; my blood became thin; I was dull and inactive; could hardly crawl about; was an old worn out man all over; could get nothing to help me until I got Hop Bitters, and now I am a boy again. My blood and kidneys are all right, and I am as active as a man of 30, although I am 72, and I have no doubt it will do as well for others of my age. It is worth a trial.—(Father.)—*Sunday Mercury.*

WANTED

A SITUATION IN A LUMBER FIRM, as Superintendent of Shanties and Drives; has had twenty years' experience. Good references can be given. Address R. M. S., 307, Rideau Street, Ottawa. 2L24

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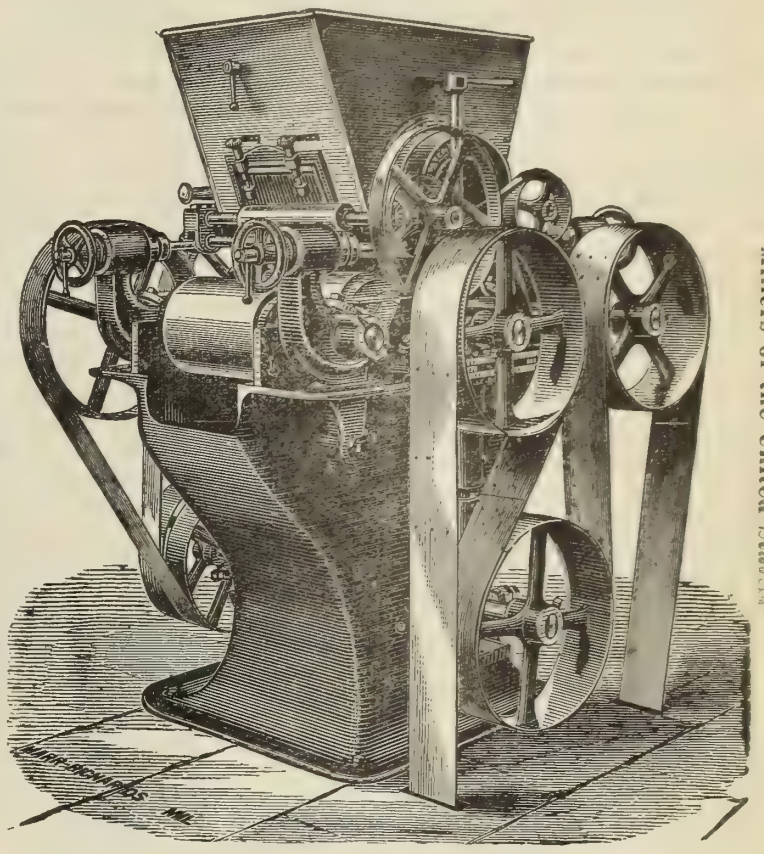

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L24-1y

INFLUENCE OF FORESTS ON WATER-COURSES.

We take the following from a paper read by Mr. David D. Thompson, of Cincinnati, before the American Association for the Advancement of Science, at that city, last month :—The rapid destruction of our forests has at last begun to attract public attention, and the efforts of those who are endeavoring to awaken interest in the preservation of the standing trees, and to promote their cultivation where none exist, are bearing fruit, especially in the prairie states of the West and Northwest. The arguments used are usually such as may be embraced in the question : What shall we do for fuel, for fences, for ships, for building material, for railroad ties, and for the innumerable industries of which wood forms a part, when our forests have entirely disappeared? For all these purposes it is probable that some substitute may be found. But there are other uses for our forest trees, and for which nothing else can take their place. Important, possibly most important, among these is the influence, and the effect of their removal, upon water-courses, such as lakes, rivers, creeks and brooks, and also upon springs and wells.

Trees during a rain storm retain a vast quantity of water. Fantrat found that the soil covered with forests received six-tenths of the whole rainfall, the trees having intercepted four-tenths. The proportion, however, will vary, depending largely upon the character of the foliage and the nearness of the trees to each other.

Besides, what is retained by the branches and leaves, the roots, by keeping the soil around them loosened, induce the speedy absorption of the larger part of the rain which reaches the ground, and much of which, but for the trees and their effect upon the soil, would immediately flow away. The foliage of the trees by partially or wholly excluding the sun's rays, prevents, in a large degree, the evaporation of the water in the soil, which in a treeless region soon renders the ground as destitute of moisture as though no rain had fallen.

By the absorption of the rain as it falls, the flooding of the streams is largely prevented ; and by retaining the water in this natural reservoir, and allowing it to flow off gradually, the streams are supplied with water continuously. It can safely be said that no stream having its source near a tract of forest has ever ceased to flow.

In the early history of the eastern and middle states, a farm was regarded as lacking in an essential feature if there was no spring upon it, and the farmer's wife would as much expect to do without milk-pans as to do without a spring-house. But now a spring-house is a rare sight. When the pioneers settled these lands, they were covered with forests, and the first and most important work of the new settler was to cut away the timber, in order to get land upon which to raise food for himself and family. For many years there was, of course, no apparent effect upon the water-courses ; but as the number of settlers increased, and the amount of forest land decreased, the springs began to dry up, and with them the brooks, creeks and smaller rivers.

It is not unusual to find in many localities the beds of what were once important mill streams waterless, except when filled by sudden freshets ; and in this state certain streams emptying into the lake, which were once declared navigable, will not now float a canoe. Previous to 1832 a Captain Delorac, of Hamilton, Ohio, annually sent a fleet of flat boats down the Big Miami river, at the spring rise ; but with the destruction of the forests along that river, the rise became so uncertain that the enterprise was of necessity abandoned. Professor Newberry, in his Geology of Ohio, states that the Ohio river has been getting lower and lower, in dry seasons, for many years. About 1871-72 the Ohio sank lower than had been known before, and at Smith's Ferry, where the Pennsylvania line crosses, a ledge of rocks was laid bare that had not been seen or heard of by any people living in that vicinity.

Lapham says that "such have been the changes in the flow of the Milwaukee river, even while the area from which it receives its supply is but partially cleared, that the proprietors of most of the mills and factories have found it necessary to resort to the use of steam, at a largely increased yearly cost, to supply the deficiency of water power in dry seasons of the year. The floods of spring are increased until they are sufficient to carry away bridges and dams, before deemed secure against their ravages. What has happened to the Milwaukee river has happened to all other water-courses in the state from whose banks the forests have been removed, and many farmers who selected land upon which there was a living brook of clear, pure water, now find that the brooks dry up during a considerable portion of the year."

Even in the state of Tennesse, where comparatively but little of the original timber has been cut, the same results are manifest. Hon. J. B. Killebrew, late commissioner of agriculture of that state, relates that, upon visiting the home of his childhood, a short time ago, he was surprised to find what at the time he left his childhood's home, thirty years previously, was a considerable stream flowing through his father's farm, had entirely disappeared, and its former bed had been ploughed up. The reason for it he found in the removal of the forests along both its banks. A striking illustration o the total disappearance of a running stream is found here in Cincinnati. Deer Creek, in the boyhood of residents of this city, now of middle age, flowed with a stream of sufficient volume to turn a mill. The denuding of the hillsides, and the consequent exposure of the entire surface to the rays of the sun, have dried up the springs which formerly fed it, and no water now flows in its former bed.

The mountains are natural forest lands, and up to a certain elevation should be perpetually covered with trees. To settlers living at the base of mountains, the forest trees are of incalculable value, for by excluding the sun they prolong the melting of the snows, absorb a large percentage of that which has melted, prevent its flowing off in a flood, and carrying death and destruction to all that may lie in its track. And the fallen trees and branches, the undergrowth, the mosses and other herbage among the decaying leaves, and the millions of leaves break the force of the falling rains, which come quietly to the earth, and sink into the soil until they reach internal cavities or porus strata, from which they are gradually distilled through perennial springs, that keep up a constant and regular supply for the streams.

Wood for Fuel.

The United States Census Bureau has been gathering some facts upon the consumption of wood for fuel. After taking the figures in our last annual for the coal output, the superintendent says :—"Even with the large increase in the coal production during the last half century, wood still keeps in the van as fuel, the consumption in this country being in favor of wood against coal in the proportion of four to one. In Maine, New Hampshire, and Vermont, wood is almost the only fuel. In many counties of Massachusetts coal is ahead of wood, while in the States generally, as well as Connecticut, the percentage is about equal. Thickly populated cities, like New York, and Hudson and Essex counties, New Jersey, containing the cities of Jersey City and Newark, are put down as entirely coal. In Pennsylvania, the great coal state, there are many entirely coal counties, while in others, as Crawford, in the western part of the state, not over 3 per cent. of coal is used. The same difference holds good in different parts of New York."

A Good Deal of It.

At the late bankers' convention at Niagara Falls, N.Y., the future utility of the water power of the falls was discussed, and the statement made that the conversion of the 60,000,000 cubic feet of water hourly passing down the river into horse power under a fall of 200 feet, would yield an aggregate of 3,000,000 horse power. A full utilization of this enormous force would serve the present needs of a population four times that of the United States to-day. Doubtless the time is not far distant when it will be partly utilized, and it must be a sort of relief to the economist to know that such a wonderful natural reserve force is at hand, if the need for it should ever arise.

A WESTERN LUMBER KING.

Hon. Philetus Sawyer, one of the senators from Wisconsin and a heavy lumberman, has lately been written up on the political side by a correspondent of the Chicago *Times*, who introduces into his article the following, which will be interesting to his fellow lumbermen :—

Mr. Sawyer's home has been in Oshkosh for 34 years, and everybody, irrespective of party, not only in the city but in this entire section, is his friend. He owns two or three counties in the pinery portion of the state, half a dozen swamps, a bank, a large share of a railway, and a goodly bundle of Government bonds. He is a thorough business man in the best sense of the term, and numerous good stories illustrative of his shrewdness are told by his admiring neighbours. A great many years ago, knowing that a very large tract of pine land, located in northern Wisconsin, was to be sold at auction in New York, he started out afoot and alone, and and made careful minutes of the location and extent of the most valuable sections of the tract. When the sale began he was on hand, and began bidding on the parcels which he wished to purchase. Some wealthy New Yorkers, knowing that he had been on the ground and had spied out the best lands, watched his course, and always outbid him. He went to the auctioneer and induced him to postpone further sales till the next day. Over night he employed an agent, and giving him a memoranda of the sections he wished to buy, went back prepared for another encounter with his eastern competitors. The sale went along very smoothly. Whenever Mr. Sawyer bid on a parcel of land the New Yorkers raised him out, while Mr. Sawyer's agent bought his lots without opposition.

Shortly afterward the New Yorkers, who felt that they had done a cunning thing, came out to Oshkosh to inspect their purchases. They visited Philetus at his pleasant home, and he entertained them well. They apologized for outbidding him, but said they had such confidence in his judgment that they knew they must make money on the lands. He assured them that he had no hard feelings toward them, and hoped they would be pleased with their pine. Just as they were starting out he said, with a merry twinkle in his eye, "Gentlemen, I would advise you, if you want to go over your lands, to provide yourselves with long rubber boots or a flat-bottomed boat."

A few days later the wise men from the east took their way homeward, after discovering that they had bought a quarter interest in a vast and bottomless marsh, while Mr. Sawyer owned all the good pine land in the tract. They did not stop at Oshkosh on their return trip, and never registered their apologies for having outbid the prospective senator.

Mr. Sawyer's word is considered as good as a government bond of the registered variety by all who know him.

A fortnight ago a wealthy mill owner of Fond du Lac went over to Oshkosh, and meeting Mr. Sawyer at the depot, said, "Sawyer, I want to buy your logs."

"I'll sell them," was the reply.

"How many have you got?"

"About five million feet."

"Are they as good as last year?"

"Yes, just about the same."

"What'll you take?"

"Fourteen dollars a thousand."

"All right. I'll take them, and send you a check for $70,000 in the morning."

This conversation is a fair sample of the senator's way of doing business.

A good many people throughout the state maintain that Mr. Sawyer is a dangerous power in politics, but they fail to show wherein he has as yet done anything amisss. Few of them have as large interests at stake in the state, or can as well afford to be honest in their private or public relations. Surely it ought to considered a credit rather than a reproach to Mr. Sawyer that he possesses the energy and ability to make his way from poverty to wealth, from an humble saw mill on the banks of the Fox river to the senate of the United States, retaining throughout his whole career the confidence and esteem of the people among whom he lived, and who have known him best.

THE WORTH OF TIMBER.

The following letter appears in the London *Timber Trades Journal* :—

SIR,—I have read with much interest the account given in your last number, at page 135, of the increasing value of timber in the North American territories, which the writer traces to its wholesale destruction by the original settlers, who did not then know the value of what they were destroying by every means in their power, which, he says, "from the standpoint of the present time may be characterized as simply atrocious." Notwithstanding which, he goes on to account for it in a very natural way, and we learn from it that, so far from there being any atrocity in it, the first scettlers had no other option but to destroy the timber which cumbered their ground or starve. An emigrant who becomes owner of a tract of land in a new country has first to consider how, with the means at his disposal, he can make it support himself and family with the least possibly outlay of money, which probably is a scarce article with him. If he finds his land covered with timber of the most useful description to distant civilization, it is to him not only a superfluity, but a mortal enemy to be grappled with and overcome before he can turn the ground on which it grows to any useful purpose—that is to grow corn and edibles, or green herbs for the service of man. If he could only wait till civilization came a little nearer to him, or till a tolerable road was made for him to the nearest navigable river—which may be done ten years hence—he might make something of his timber : but he must get it out of his way at once, or as much of it as will enable him to sow a piece of land sufficient for him to raise food on when the next season comes round, by which time the resources he has been able to bring with him into the wilderness will probably have given out. His strong arms and his trusty axe, with such help as his family can give, are all he has to depend on, and the prospect is gloomy enough ; and, if he calls in fire to his aid, it is because there is nothing else to befriend him. He finds himself in precisely the same position as the poor cock on the dunghill ; he wanted a barley-corn, instead of which he scratched up a precious stone, which was no sort of use to him. Not only "fifteen, nay ten years ago," was it the custom to leave only the best trees, destroying all under 12 or 14 in., but even at this day (and for ages to come) in Canada there will be new settlers, in the remote forests, to whom the timber around them is the bane of their lives, who would welcome a gang of lumberers willing to chop down the trees, though they were all of black walnut, and clear them away for nothing, as if they were good angels from heaven.

Sir, we have now great facilities for the transportation of wood, in the application of steam and the use of railroads, which were unknown to our grandsires, but even now the prices of imported timber for building purposes do not always represent the cost of getting it to market, even if the trees, as they stood before the axe was laid to the root, were made a present free gratis to the lumbermen who undertook the work. In your number for August 27th, p. 142, there is a report of the sale of a parcel of 4th Richibucto spruce deals lying at Barrow. They were of good mercantile lengths, 3 × 9 to 20 in. wide, and the best sizes only fetched £5 per Petersburg standard. Now as £3, in round numbers, goes for freight alone across the Atlantic, only £2 would be left to pay for 165 cubic feet of sawn merchantable spruce delivered on board ship in the port of Richibucto.

Query, after paying for cutting, squaring, hauling to riverside, launching, rafting, and floating down to port, then sawing, sorting, and shipping, what would be left to pay for this valuable wood as it stood in the forest? Whatever has been inevitably or even wantonly destroyed does not appear to render American building timber much more costly at the present day than the value of the labor bestowed on it to get it to market.—I am, sir, your constant reader,

LAND'S END.

Liverpool, Sept. 7th, 1881.

DR. FOWLER'S EXTRACT OF WILD STRAWBERRY cures summer complaints, diarrhœa, dysentry, cholera morbus, cholera infantum, sour stomach, colic, nausea, vomiting, canker, piles and all manner of fluxes.

THE EVIL OF SHOEING HORSES.

For some time past an active controversy has been going on in England between those who adhere to the usual style of shoeing horses and a few innovators who contend that the old method is the cause of more than half the diseases to which horseflesh is heir.

The subject is treated very fully in a series of papers, which appeared originally in the *Farm Journal*. The writer, who goes under the *nom de plume* of "Free Lance," has recently published these productions in book form, and it is on the opinions advanced therein that the following remarks are founded—altogether "without prejudice," as the lawyers say. "Free Lance" tells us that during his working days the horse suffers perfect martyrdom owing to the interference with nature which results from shoeing. The animal is forced to adopt an artificial gait which sends aches and pains through all the nerves, tendons, and muscles of his legs; he strains himself severely by slipping on greasy roadways; he is worn out unnecessarily by being deprived of his natural grip of the ground; and frequently suffers mutilation or injury through inability to keep his feet. But not only are shoes responsible, it is said, for a great deal of unnecessary pain and inconvenience to the horse while at work; they are the fruitful source, according to the same authority, of numerous diseases of the feet and legs which render him prematurely unfit for use. Shod horses, according to "Free Lance," are constantly afflicted with corns, side-bones, sand crack, greasy heels, seedy toe, dropsole, ring-bone, thrush, quittor, ossified cartilages, spavins, curbs, splints, windgalls, navicular disease and other maladies; while those who go without shoes enjoy almost total immunity from these ailments. If this is true, it is evident that the money loss involved in the maintenance of the present system must be enormous. Several eminent veterinary surgeons maintain that a horse, and most other animals, should live five times as long as it takes to reach maturity. Horses do not usually reach the full perfection of their powers until seven years old, and consequently ought to live until they are thirty or thirty-five years old. Under existing circumstances, however, they are termed old at ten and very old at twenty years of age, while fully three-fourths either die or are destroyed before they reach the age of twelve. If horses beginning to work at three are worn out before they reach twelve years old, then it is evident that the working life of the animal is shorter by fourteen years than nature intended it should be. In other words, three horses, are used up in doing what ought to be the work of one, and this extravagance in the United Kingdom necessitates an expenditure within a given time of about £200,000,000 instead of £68,000,000. The causes of this unnecessary mortality, according to "Free Lance," are: The absence of springs and brakes from the vehicles horses are compelled to draw. The use of dangerous nostrums, together with hoof ointments, stoppings, &c., by prejudiced farriers and ignorant grooms. Last, but not least, the use of shoes and the method of applying them. Horses shoes are of comparatively modern origin. "Xenophon, who wrote the most complete work on horsemanship of his day, makes no mention of horseshoes; while, on the other hand, he is particularly explicit as to the means to be taken to harden and toughen horses' hoofs. He recommends specially for this purpose bare stone pavement, which, he says, 'will cool, harden, and improve a horse's feet merely by his standing upon it, while the same benefit will result to his hoofs as if he were made to travel on stoney roads every day.' Another writer, Vegetius, says:—'The floor of the stable should not be made of soft wood, but of solid hard oak, which will make the horse's feet as hard as rock.'" It will be observed that these writers, so far from considering that a horse's hoofs should be spared because they are unprotected, insist that constant contact with hard and rough surfaces is essential to their preservation. They probably deduced from observation the principle which has been thus formulated by Mr. Miles:—"It is an invariable law of animal economy not to continue to unemployed structures the same measure of efficient reparation that is extended to parts constantly engaged in performing their allotted tasks." If the horse's hoof is intended by nature to bear rough travelling without injury, it stands to reason that constant subjection to the conditions it is designed to meet can alone maintain it in a thoroughly efficient state. "The constant use of litter (in stables) makes the feet tender, and causes swelled legs; moreover, it renders the animals delicate. Swelled legs may be frequently reduced to their natural size by taking away the litter only. Let any proprietor go to his stable, upon returning on a Sunday from morning church service, when the horses will perhaps have been left to themselves for three hours, and he will find that his horses have been trying to get rid of it by scraping holes in it, in which to stand at ease and comfort on the bare floor, having pushed as much as they can into the gangway. It is probable, also, that instinct takes part in their dislike to it, on the score of its being unhealthy as well as uncomfortable to them.

"Even at the present time in many parts of the continent of Europe, and in a considerable portion of the rest of the globe, horses run about over rocks, through ravines, and up precipitous ridges, unshod; yet all this is done without difficulty, and to the evident advantage of their hoofs, for these animals never suffer from contracted feet, or from corns, sand cracks, &c., until they become civilized and have been shod." Again: "During the mutiny in India many of our cavalry horses went unshod, because they could not get shod, and they never went better in all their lives." The special military correspondent of the *Morning Advertiser* said recently of the irregular cavalry employed in the Zulu war:—"Few of the men have their horses shod in front; some do not shoe at all." On one excursion he made in company with this corps they had to go over "sheets of polished, wet and slippery stone in the torrent beds, making one wonder how our unshod horses could keep their feet. All through the reports on the war, not a complaint was made as to these horses falling lame. Surely there must be something in this. Sheets of wet, slippery rock, and rolling stones in river beds, would be calculated to try the hoofs to the utmost; yet in the pursuit of the Zulus, when they fled at Ulundi, these 'ponies' (from 14½ hands downward) were able, we are told, to follow miles further than the shod horses. In North, Central, and South American countries, where, outside the pastures, hard, rough, stony ground largely predominates, horses and mules do very heavy work without any protection to their feet. In some parts of these countries," says our author, "it rains every day in the year, and in other parts they get dry roads during six months and wet ones during the other six. The horses have to travel over either, and over naked sheets of rock, as they in turn present themselves, and, as Mr. Douglas says, 'without difficulty, and to the evident advantage of their hoofs, for they never suffer from contracted feet, or from corns, sand-cracks, &c.' Yet their work is of the hardest. Many of them bring down from the interior (some hundreds of miles) two bales of cotton, which weigh, with pack-saddle, &c., over 300 cwt., and in fording rivers have to carry across the driver also. This is the way in which all the commerce of the country is carried on. There is not a horseshoe or a nail to be obtained over the whole route, and on some roads at crop times, nearly 2,000 pass daily, some descending to the coast, and others returning inland. In Ireland 'donkeys are worked unshod in draught and over macadamised roads, even over loose broken stones;' and not only are their hoofs uninjured by such treatment, but they actually outgrow the wear and tear of work, becoming turned up at the toes if not periodically rasped."

July.

During this month summer complaints commence their ravages. To be forewarned is to be forearmed. Dr. Fowler's Extract of Wild Strawberry is the best preventative and cure for all forms of bowel complaints and sickness incident to the summer season.

August.

The summer season now reaches its climax, and is prolific in developing bowel complaints. Over-indulgence in fruit, immoderate drinking of iced waters and summer beverages, in a few hours produce fatal ravages among children and adults. Dr. Fowler's Extract of Wild Strawberry is the most reliable remedy for all forms of summer complaints. Safe, pleasant, and prompt in its effects. All dealers keep it.

E. S. VINDIN,
Commission, Shipping, Forwarding and General Agent.
LUMBER MERCHANT
Office, Tempest's Block, Port Hope. L11

A BARGAIN—GRIST AND SAW MILL FOR SALE, paying 12 per cent. clear; price $9,000; and above percentage guaranteed. Apply to
JOSEPH DAVIES & Co.,
Lumber, Coal, & Commission Merchants,
46 CHURCH ST. TORONTO. 1yL16

St. Lawrence Hall,
PORT HOPE.
Is noted for its superior home-like comforts—a well kept table, equalling the best hotels in Toronto, and large, well-furnished rooms. Good sample rooms on ground flour. Walton Street, Port Hope.
b26 WM. MACKIE Propr,ietor.

Caledonian Hotel,
GRAVENHURST.
JOHN SHARPE, Proprietor. This Hotel has been newly opened out, pleasantly situated on Main Street, within five minutes walk of Northern Railway station. Bar kept with best assorted Wines, Liquors and Cigars. Every attention paid to guests. Good Stabling. 1yL15

The American Hotel,
BARRIE, ONT.
Collier Street, Adjoining the Market.
RATES REASONABLE, CENTRAL LOCATION, FREE BUS TO AND FROM ALL TRAINS.
☞ Every accommodation for Commercial and LUMBERMEN.
L14 W. D. McDONALD, Proprietor.

Fraser's Hotel,
GRAVENHURST, ONT.
HENRY FRASER, proprietor, (successor to Dougland Brown.) Mr. Fraser having purchased and thoroughly renovated and refitted that old established hotel, so long and popularly kept and owned by Dougland Brown, in the Village of Gravenhurst, is now in a position to attend to the wants of the travelling and general public. Parties *en route* to the Muskoka District, will find "Fraser's" a comfortable stopping place. The Bar and Larder are well furnished. Convenient Sample Rooms for Commercial Men. Good stabling and attentive hostler. Free 'bus to and from trains and steamboats. b26

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CLUTHE'S PATENT SPIRAL TRUSS all attachments improved. No more buckles, all on solid brass casting Book on rupture and human frame free. Send address in full post card. Best true information about rupture and deformities. CHAS. CLUTHE, Surgical Machinist, 118½ King Street west, Toronto. 12L13

CANADA TRUSS FACTORY
(ESTABLISHED 1856.)
F. GROSS,
Manufacturer of SURGICAL and ORTHOPŒDICAL INSTRUMENTS. ARTIFICIAL LIMBS made to order. INDIA RUBBER GOODS of every description. L19-1y
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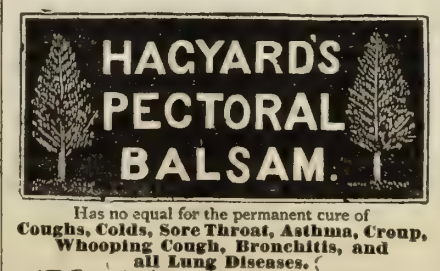
GRATEFUL—COMFORTING.
EPPS'S COCOA
BREAKFAST.
"By a thorough knowledge of the natural laws which govern the operations of digestion and nutrition, and by a careful application of the fine properties of well-selected Cocoa, Mr. Epps has provided our breakfast tables with a delicately flavored beverage which may save us many heavy doctors' bills. It is by the judicious use of such articles of diet that a constitution may be gradually built up until strong enough to resist every tendency to disease. Hundreds of subtle maladies are floating around us ready to attack wherever there is a weak point. We may escape many a fatal shaft by keeping ourselves well fortified with pure blood and a properly nourished frame."—*Civil Service Gazette.*
Made simply with boiling water or milk. Sold in packets and tins only (¼-lb. and lb.) labelled
JAMES EPPS & CO., Homœopathic Chemists,
London, England. L19-1y



Has no equal for the permanent cure of
Coughs, Colds, Sore Throat, Asthma, Croup, Whooping Cough, Bronchitis, and all Lung Diseases.
☞ Every bottle guaranteed to give satisfaction.
T. MILBURN & CO., Proprietors Toronto.

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JOSEPH McAFEE,
(LATE ANGUS McAFEE.)
Warehouse, Main St., St. John, N.B.
AGRICULTURAL IMPLEMENTS.
MANUFACTURER OF
Cooking, Ship, Parlor & Office Stoves
MILL CASTINGS
Ship Windlasses, Capstans, and Ship Castings of all kinds,
(MADE TO ORDER.)
Power Capstans, Patent Ship Pumps
1y With Copper Chambers. L20
Lead Scuppers & Water Closets & all goods in my line for Ships' use.
Work done to Order with Quick Despatch.

IRWIN & BOYD
Commission
Lumber Dealers,
FORWARDERS,
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PORT HOPE.

KERR BROS.
PRACTICAL
Founders, Machinists,
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Manufacturers of Marine and Horizontal and Portable
Engines, Boilers
Grain Elevators & Steam Hoists,
Saw and Flour Mill Machinery.
With Latest Improvements A SPECIALTY.
The ABEL EDWARDS CENTENNIAL TURBINE WATER WHEEL.
RODEBAUGH'S SAW FRAME, MILL DOGS and SAW GUIDES.
WATER WORKS, THE LATEST AND MOST IMPROVED, MADE TO ORDER.
LIGHT and HEAVY BRASS and IRON CASTINGS.
☞ Plans and Specifications on application. ☜
The Walkerville Foundry
AND
MACHINE WORKS.
Walkerville, Ont., June 1881. 12L16

Travelling Agent.

MR. A. L. W. BEGG has been appointed agent for the CANADA LUMBERMAN, and is authorized to collect subscriptions and grant receipts therefor and to make contracts for advertisements appearing in its columns.

The Canada Lumberman

DEVOTED TO THE LUMBER AND TIMBER INTERESTS OF THE DOMINION.

PUBLISHED SEMI-MONTHLY BY

TOKER & Co. PETERBOROUGH.

Terms of Subscription:

One copy, one year, in advance	$2 00
One copy, six months, in advance	1 00

Advertising Rates:

Per line, for one year	$0 90
Per line, for six months	50
Per line, for three months	30
Per line, for first insertion	10
Per line, for each subsequent insertion to 3 mo's.	05
Cards not occupying more than 12 lines (1 inch) per annum	8 00
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Special rates will be made for page, half page and column advertisements.

Advertisements intended for insertion in any particular issue should reach the office of publication at east three clear days before the day of publication, to insure insertion.

All communications, orders and remittances should be addressed and made payable to TOKER & Co., Peterborough, Ont.

Communications intended for insertion in the CANADA LUMBERMAN, must be accompanied by the name of the writer, not necessarily for publication, but as a guarantee of good faith. Communications to insure insertion (if accepted) in the following number, should be in the hands of the publishers a week before the date of the next issue.

PETERBOROUGH, Ont. OCT. 15, 1881.

HUGH SUTHERLAND & BRO. have bought out Towless' lumber limits on Rainy Lake, comprising 100 square miles, his mill at Fort Francis, his lumber on hand and logs, his farm, and his buildings. It is their intention to dispose of their retail business and go into the manufacturing and wholesale business exclusively. They will enlarge the present mill at Fort Francis to a capacity of 20,000,000 feet per annum. There are 300,000,000 feet on the limits. The sale yard will be at Rat Portage and the head offices at Winnipeg.

THE *Timber Trades Journal* says the introduction of steamers into the timber trade has had one good effect which must not be ignored—we mean the increased speed with which cargoes of wood goods are discharged. Some of the recorded feats in this line would have been thought impossible a few years ago. One of the latest instances that have come under our notice is the screw steamer *Nellie*, belonging to Messrs. Pyman & Co., which arrived at West Hartlepool from Soderhamn, on the 16th inst., with 240 standards of deals and boards for Messrs. Harrison & Singleton. The vessel was berthed in the Hart Dock at 9 a.m., the cargo was all discharged by eleven o'clock the following morning and the vessel proceeded to sea the same night with a cargo of coals.

THE *Timber Trades Journal* says Sweden derides American competition in the wood trade, as the difference of expense in getting to market here under our free trade system is glaringly against our colonies. This may be seen at a glance, requiring no elaborate argument to prove it. 60s. was quoted in our last impression as the freight of deals, from Quebec to London, which is below the average, and only a lower port rate. 45s. in the same paper is stated as the freight from Sundswall to London, which is above the average. So that we may assume the the minimum difference to the advantage of Sweden is 15s. per standard. This is just the same as if, being equidistant, Canada goods were subject to a duty of 15s. per standard, equal to about 10 per cent. on the f. o. b. price of high-class deals, and 15 to 20 per cent. on inferior qualities. This is a barrier which, like a turnpike gate, there is no evading. Under a system of duties Canada was put formerly on a more level footing, but free trade leaves our colonies to shift for themselves against the natural advantages of other countries.

SPEAKING of the forests of Russia, *L'Echo Forestier* says :—On the estate of Lenine, belonging to Prince Wittigenstein, there are 56,883 hectares of woodland covered with trees of the greatest commercial value. The oak appears to be the favorite, and there are no less than half a million monarchs of the forest upon the estate, valued at over four and a half million francs. There are also 450,000 pines, valued at ten francs each, or 4,500,000 francs. The entire value of the wood on the property is estimated at over a million pounds sterling.

THE Port Blakely, Wash. T., Mill Co. are enjoying a large lumber order from Shanghai, the filling of which will require five vessels, the aggregate cargoes amounting to 3,000,000 feet or more. Three vessels are there now for loads, namely, the *Earl of Elgin*, the *Hollander*, and the *Marsha*, all barques, and two more are expected soon to arrive. The lumber goes in large pieces—squared timbers, which are again cut on arrival at the other end of the broad Pacific into dimensions to suit ; not that they can be better or more cheaply cut there, bnt that by some custom regulation a light tariff is imposed on the importation of manufactured timber. This order is, perhaps, the heaviest one that ever came to a Puget Sound mill from China.

THE Montreal *Gazette*, in an article on forest fires, writes as follows :—We want more bush than we have. We want not only protection for what is left, but a system by which tree planting may be regularly prosecuted wherever it is needed. We want, in fact, what almost every State in Europe has long found the necessity of, a complete scheme of forest management, including schools of forestry, where young men may be trained for that purpose. These should be established at once. There is no lack of experience on the subject to our hands. Why should we wait until some sudden wave of destruction sweeps all before it, and leaves us nothing but helpless regret? With a regular system of educated forest officers and police, adapted both for preservation and creation, we could in a few years do much to atone for past neglect ; otherwise, we may some day be reduced to the position of Madeira, which received its name from its magnificent and varied wealth of forest, but which has long been dependent on foreign supplies for even the materials of native construction.

A CORRESPONDENT of the Buffalo *Lumber World* says the Saco is the most wonderful river with its tributaries for growing pine lumber of any place in all New England. Although cutting pine has been going on for one hundred years, get it appears to be inexhaustible. It comes up everywhere, and it appears that it makes no difference what kind of growth is cut off, it comes up to pine, and mostly white pine. About forty millions of all kinds of pine, spruce and hemlock are floated down the Saco every year, yet the supply appears to be abundant. Only about sixty miles miles of this river is capable of log driving, as above that the stream is too rapid and rough to admit of it. It is calculated that the town of Frysburg has now eighty million of pine timber, and it grows at the rate of five millions a year, or 16 per cent. There are no square edged pine shipping boards sawed on Saco river now. The small and roughest logs are sawn into § in. box-board rough edged, and sell for from eight to ten dollars per thousand. The largest and best are put into sugar box shooks for the West Indies market. The price for the last two years has been very low, about 50 cents apiece. It takes three thousand feet to make one hundred boxes. The other logs are sawn into 1⅛ in. boards for heading, and of these there are a large amount made on this river. They sell for 18 to 25 cents per pair, according to size. It takes one thousand feet to make sixty pair on an average. A large part of heading lumber is sawn from hard pine, as it grows in abundance on the plains. Hemlock boards now sell for $12, spruce $14 to $16 per thousand. There are not so many mills now as formerly, but what they are make up in speed and despatch what the lack in number.

"MUST SAY it's the nicest thing I ever used for the teeth and breath," says everyone having tried "Teaberry," the new toilet gem. Get a 5 cent sample.

WESTERN LUMBER TRADE.

At the monthly meeting of the Chicago lumber dealers to fix the October price list, the directors recommended that no changes should be made except in shingles, in which item of the list they recommended a decline of five cents per thousand on clear, and twenty cents per thousand on extra A and standard A. This recommendation was at once adopted by the meeting, but on a motion for reconsidering this action a few further changes in the list were thought judicious, and on motion an advance of $1 was ordered on the items of first and second clear, two-inch ; A and B selects, two-inch ; one and one-fourth inch third clear, and one and one-fourth inch A and B selects. With these changes the former list was re-affirmed as the October list, and will so stand unless circumstances shall dictate the necessity of an amended list during the coming month.

The *Lumberman* says that the accumulation of stocks at Chicago is not at all in proportion to the increase in the volume of trade, and this fact was officially recognized by the following resolution, which was recommended by the board of directors, and passed at the above meeting :—

Resolved,—That in the light of the experience of the season of 1880, and thus far during the season of 1881, the past, present, and prospective increase in the consumptive demand for lumber throughout the West imperatively requires of the Chicago lumber dealers the holding of a stock in their yards on January next amounting to not less than 650,000,000 feet, in order that the requirements of their customers, both as to quantity and shipping condition, may be fairly met ; and we, as a board of directors, would point to the fact that but two months of navigation remain, during which time an increase of 75,000,000 feet must be obtained during each month in order to meet what we firmly believe to be the requirements of a healthy winter and spring business, and that, in our opinion, the present prospect and rate of increase do not warrant the belief that the necessary quantity is likely to be realized by a large difference.

The secretary presented an estimate. based upon his daily reports of the present stocks on hand, placing that of lumber at 511,964,279 feet, and of shingles at 200,600,000, on September 25, an increase, as compared with the yard reports of October 1, 1880, of 47,916,234 feet of lumber, and 66,355,000 shingles.

C. P. R. LAND DEPARTMENT.

Early in May the Company, having taken into consideration the organization of a land department to deal with the vast acreage to be awarded as the line progresses, decided to establish the head office in Winnipeg, and appointed Mr. J. H. McTavish, Chief Factor of the Hudson Bay Co. here, as Land Commissioner. Mr. C. F. Kindred, formerly chief clerk of the Northern Pacific Land Department in St. Paul, was subseqently appointed Assistant Commissioner, and the organization of the department has been rapidly completed by Mr. McTavish, who secured the premises formerly occupied by the Bank of Montreal here for offices. Land examiners have been in the field for some time past, and the office staff have been busily engaged recording and classifying the applications that have been made to purchase lands. Over 1,500 applications have already been received, the amount of land represented by them amounting to about 750,000 acres. On Monday, the 26th, the Department will commence to deal with these applications, and will on and after that date be prepared to sell land. In all cases in which persons have settled on railroad lands in good faith and made reasonable improvements, their claims will be respected, and they will be allowed to purchase the land on the Company's advertised terms.

The Company has decided to sell only to actual settlers or to persons who agree to cultivate and otherwise improve, and the pernicious evil of speculators buying large tracts and locking them up will be thus avoided. The price of lands will be $2.50 per acre, one-sixth in cash and the balance in five equal annual instalments. The form of contract which has been prepared provides that until the final payments are completed, all improvements placed on the premises shall remain ; that the purchaser will regularly pay all taxes, and that he will cut no wood or timber upon the land except for fuel and fencing and the erection of buildings thereon. It is provided that the purchaser shall, within four years after the date of the agreement, bring under cultivation, and sow and reap a crop on three-fourths of the land, but if he shall erect buildings thereon, satisfactory to the Company, and shall reside thereon continuously for three years at least of the four years, then at least one half of the land shall be by him so cultivated and cropped within four years. It is further provided that the purchaser will be allowed a credit of $1.25 per acre for each acre cultivated and cropped during the four years, or if he erect buildings and reside on the land continuously, then the period during which breaking may be made and allowed for will be extended. On the completion of the payments and the performance of the terms of the agreement, the Company will give a deed conveying the land in fee simple, reserving, however, a strip or strips 200 feet wide to be used by the Company for right of way or other railway purposes, wherever the line of the C. P. R. or any branch thereof is or shall be hereafter located over the land. If the purchaser fails to carry out the terms of his agreement, all his rights, etc., in the land will cease, and it will revert to the Company, but the Company may, in its discretion, revalue the land and make a new sale of it to the purchaser at the revaluation.—*Winnipeg Free Press.*

A Large Walnut Tree.

Malachi White, of Middletown, has sold to Watson & Buckman, lumber dealers, of Newtown, Pa., the large walnut tree which has stood in the door-yard for at least 150 years past, and from which the farm derived the name of "Walnut Green. From the best information that can now be obtained, it is supposed the tree was planted by John Woolston, the owner of the farm, about the year 1728. The tree was twenty feet in circumference, nineteen feet to the limbs, and as straight as an arrow. Some of the limbs are about three feet in diameter and thirty feet long, making good sized saw logs. The tree was a great bearer, and it is said that as many as sixty bushels of walnuts have grown on it in a single year. The cutting and hauling of such a tree is no inconsiderable task, and it had to be chopped for a considerable distance before the eight-foot cross-cut saw could be worked to advantage. After cutting the tree down the log was cut off nineteen feet long, and loaded on a log carriage and taken to Newtown, where it will remain about a year, or until the sap becomes colored, before it will be sawed.

Department of Crown Lands,

TORONTO, 6TH OCTOBER, 1881.

NOTICE IS HEREBY GIVEN THAT, UNDER AN ORDER IN COUNCIL,

TIMBER BERTHS

In the undermentioned Townships in the

MUSKOKA and PARRY SOUND DISTRICTS,

Will be offered for Sale by Public Auction at the Department of Crown Lands at twelve o'clock noon.

On TUESDAY, the 6th day of December next,

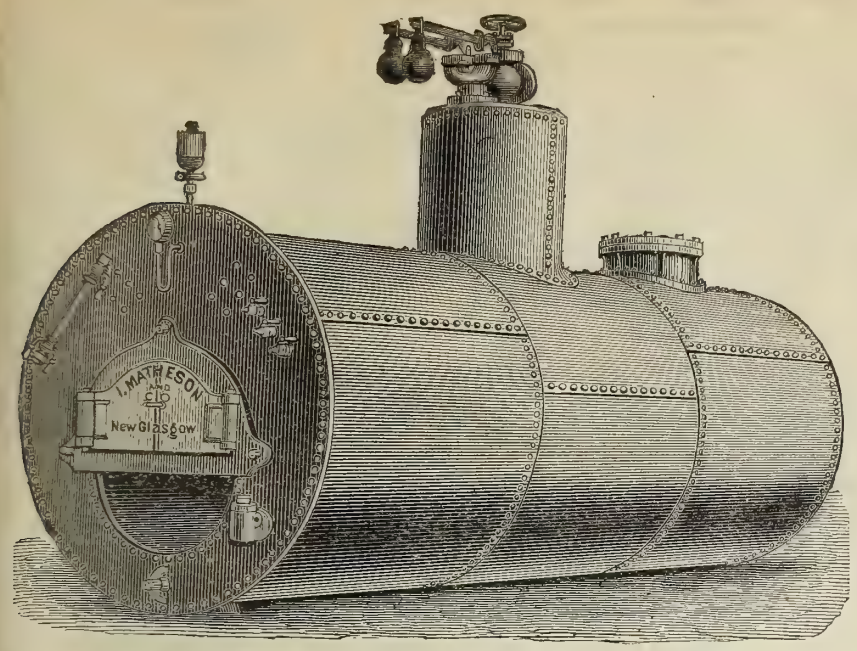
viz. :—Townships of Mowat, Blair, McConkey, Hardy, Patterson, Mills, Sinclair, Bethune, Proudfoot, Gurd, Machar, Strong, Joly, Laurier, Pringle, Lount, Nipissing and Himsworth.

The area to be disposed of in the above Townships as Timber Berths is upwards of 1,400 square miles, and to suit all classes of purchasers each Township will, as nearly as practicable, be divided into four berths.

Sheets containing conditions and terms of Sale, with information as to Area and Lots and Concessions comprised in each Berth, will be furnished on application personally or by letter, to the woods and forests branch of the Department, or to the Crown Timber Offices at Ottawa, Belleville and Quebec, and the Office of T. E. Johnston, Esq., Parry Sound.

T. B. PARDEE.

4l24 COMMISSIONER.



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It eradicates scale, and when the Boiler is once Clean a very small quantity keeps it Clean and Free from all Incrustation.

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Engraver on Wood

And ELECTROTYPER.

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L24-1y 144 Upper Water Street, HALIFAX, N.S.

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Edge Tools, Axles, Springs,

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SPRUCE, PINE AND HEMLOCK SHINGLES

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We BUY and SELL for Cash, therefore it enables us to do business on very SMALL PROFITS.

NOTE THE PRICES.

We give a Good Tweed Suit for.....$6 00
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LUMBERMEN!

When you visit Toronto, come direct to OAK HALL, and fit yourselves out with a Good Suit. Remember the address:—OAK HALL, the Great One Price Clothing House, Toronto, opposite St. Jame's Cathedral. 1yL13

THE NEW DOCKS AT LIVERPOOL.

The *Timber Trades Journal* says that the reception accorded to the Prince and Princess of Wales at Liverpool on Thursday week was of the most gratifying character. The Prince performed the ceremony of opening the great dock gates, and the Princess the interesting duty of "christening" one of the docks, the Alexandra. At a banquet following the ceremony the Prince of Wales, in replying to the toast of his health, alluded to this important addition to the dock system of Liverpool in these words :—"We are not likely to forget the reception we have met to-day at Liverpool ; and although it is by no means the first time that we have visited this great and important city, still the special occasion which brought us here to-day is one which is not likely to be forgotten by us. We have not only visited your great and important city, but we have taken part in a great and interesting work, one which, I trust and feel convinced, cannot fail to improve, if possible, even still more the great commerce of this city, and at the same time evince the great modern engineering skill of the present day. Everybody knows that Liverpool, after London, is the second largest city in the United Kingdom, but there are a few statistics connected with the docks of this great city which I perhaps may mention on this occasion. At the commencement of the century dues were paid on 450,000 tons, and in the present time they amount to 7,800,000—very nearly 7,900,000—tons. In the year 1864, when my late lamented father visited your town and opened the dock which is now called after his name, the docks and basins amounted to only 27, whilst now they amount to 58. Again, in that year the length of the quays was nine and a half miles, and it now amounts to forty miles. At that time the water space occupied by the docks was 122 acres ; it is now 543 acres, and whilst the extent of the dock estate was then only 506 acres, it now amounts to 1,545. These figures show clearly the great prosperity of this city, and they also show, under the able chairmanship and able management of the chairman of the Dock Board, how flourishing everything in connection with these great docks is. I must not forget to allude to the name of one who, though he is taken from you, must ever remain in your memories, the name of the late Mr. Jesse Hartley. It was he who first founded the modern system of docks. After his death his son succeeded him, but only for a short time, and then the mantle of Mr. Hartley descended on the shoulders of Mr. Lyster, the present engineer."

We abstract the following description of the new docks from the *Daily News*.—

"The river front of the Dock Estate at Liverpool and Birkenhead is about eight and a half miles. It covers more than 1,500 acres, has a water area, including the new docks, of 543 acres, and forty miles of quays. Eighty years ago the vessels entering the docks and paying dues fell far short of half a million ; now it is nearly eight millions—figures which show the rapid growth of the latter in size. The new docks are calculated to accommodate the largest ships now in use, and were commenced eight years ago. A sea wall, crowned by a magnificent promenade, extends northward for 6,000 ft. across the front of the new docks to the Seaforth Battery, whence another sea-wall returns, almost at right angles with the first-named, towards the shore. The area thus enclosed is about 310 acres."

In reference to the Canada Dock, the writer says :—The Canada Basin and its piers, constructed some years ago, have been in a great measure rebuilt and remodelled. Large timber jetties have been added outside the pier-heads, for the purpose of sheltering the entrance and facilitating the egress of ships. To all who know the Mersey this care to prevent accident will not appear superfluous under certain conditions of wind and tide. The basin has also been enlarged, and an elaborate system of sluices constructed within it and carried along the jetties to the outer heads."

In the "Alexandra Dock the main body of the dock is an irregular rectangle, 1,600 ft. long by 500 ft. in width, enclosing some seventeen acres of water ; the total water area is 44¼ acres, with 11,814 feet of quays. The water area of the whole group of new docks is 81 acres, with more than four miles of quays and 25 acres of new sheds."

OTTAWA SQUARE TIMBER TRADE.—1881.

From Our Own Correspondent.

OTTAWA, Sept. 26.—The following is a detailed statement of the number of cribs of timber brought down from the Upper Ottawa during the present season :—

J. R. Booth	529
Caldwell & Son	329
A. & P. White	311
R. H. Klock	179
Wm. Mackey	321
Thistle & Carswell	143
J. B. Dickson	102
Octave Latour	163
R. Campbell & Son	580
A. McLean	244
Hilliard & Dickson	106
Fraser & Curry	114
John Fraser	112
J. Francis & Co	243
Bell & Hickey	119
Fraser & McCoshen	381
J. & S. Bryson	189
Thistle & Eagan	179
R. & W. Conroy	176
David Moore	185
R. & J. White	99
Alex. Fraser	144
J. & D. Grier	108
Barnet & McKay	309
McLachlin Bros	271
Robert Grant	56
J. & G. Heavy	34
W. Croft	34
Boyd Caldwell	88
McCool & Sunstrum	87
Gillies Bros	88
Sills Bros	53
Wm. Mason	93
J. Pompore	18
Levi Young	93
Chas. & Wm. Mohr	81
G. A. Grier	93
R. Nagle	94
Young & Bronson	89
James Findlay	12

This gives a total of 5,749 cribs ; but, in addition to the above, there was a small raft brought down for James Findlay by rail, while all the timber of the British Canadian Company is coming down the same way. The timber by rail would be equal to 600 cribs, so that the grand total of timber reaching market will be 6,349 cribs. To this must still be added 750 cribs in the four rafts of O. Latour ; the three of David Moore, and one of R. and J. White, which stuck in the Upper Ottawa, in order to get at the season's output of square timber.

An Architect on the Situation.

An architect, who has done a good deal of work for speculative builders this season, is inclined to think that the marked activity seen in the last six monts, will decline gradually for the next six months.

"What about prices?" asked a representative of the *Real Estate Record*, of New York.

"My opinion is that the price of labour and material will fall to their normal condition, and then people will think about building again. You know that from 1865 to 1873, the market was in a see saw condition. A year of activity was followed by a year of dullness. Of course, when the panic came, everything came to a standstill for several years. It is only within the last two years that the building trade has regained its wonted buoyancy."

Don't you think there are too many high-priced houses in the market to-day ?

"I have no doubt of it. As soon as prices become settled, builders will start new enterprises, and as a natural consequence will be able to place houses in the market next year at a figure lower than those who have built this year possibly can."

Somebody will lose money then ?

"Yes, but the few will suffer for the good of the many. Rotten concerns will be pushed to the wall, and safer business must inevitably follow."

Nature Makes no Mistakes.

Nature's own remedy for bowel complaints, cholera morbus, cholic, cramps, vomiting, sea sickness, cholera infantum, diarrhœa, dysentry, and all diseases of a like nature belonging to the summer season, is Dr. Fowler's Extract of Wild Strawberry, which can be obtained of all dealers in Medicine.

A WAVE OF IMPORTATION.

The *Timber Trades Journal*, of Sept. 17, says :—Not only in London but all along the east coast there is an unusually large supply of wood goods reported in our last number, chiefly from Scandinavia and the Baltic, by reason of about a week of northeasterly winds blowing steadily on that side of the island of Great Britain, being really the first spell of that kind which we have had from that direction for some months past. The prevailing winds this summer were from the west and south-west, with an occasional slant from the eastward, scarcely enduring twenty-four hours, or a day or two at most, when they again reverted to the west as before. The consequence was that east country ships dropped in slowly, and the timber-carrying trade seemed to be about to be done chiefly by steamships, sailing vessels making so small a show up to the end of July in comparison of the anticipations of the trade.

We had ourselves warned importers that the summer months were likely to make up a good deal of the shortcomings of the spring, and we certainly had an impression that July and August would bear out the view we took ; but when the returns for July showed a substantial deficiency, as compared with last year, our confidence in a plentiful supply somewhat abated, and it appeared likely that the trade would be in a position to make a good profit on the purchases they had made earlier in the year ; also reports began to be circulated that demand was overtaking supply, insomuch that those who had made contracts for their season's importation were regarded as on the lucky side, and those who had hung back in doubt during the previous months seemed then to be in some haste to secure a larger share of the stock still remaining for shipment abroad than they had previously intended to buy.

The returns for August again, though those of a good average month, were still moderate, and short of public expectation. This gave renewed briskness to speculation, and some considerable stocks abroad found buyers ready to deal for them offhand, as we intimated last week. The sudden change in the ratio of supply which we then had to record must, however, in some degree damp the ardour of buyers. People wondered what had become of all the sailing ships that were supposed to be in the trade, and those who had chartered and got their bills of lading long since began to fear the short days would be here before the cargoes on the way home. September has already materially abated their apprehensions, and the opinions of the trade in regard to the ultimate wind-up of the year will again vary.

The importation to the United Kingdom for the first week of this month averaged more than 110 timber ships per day, and if it contiuues at that rate to the end of the month, and assuming the average cargo to be only 150 standards, we should have imported nearly as much in excess of last year as we were at the end of August in arrears of it—viz., about 760,000 loads. But this, of course, is not altogether likely, though it is far from impossible that we shall tread very closely on the heels of last year, for if the North Sea were cleared of the bulk of the cargoes on it last week, the Atlantic, as shown by the returns from the west coast, was all the other way.

Liverpool, with heavy stocks, had very little added to them, and, though doing a fair trade, could not get any appreciable advance. The best sizes and qualities of St. John spruce, at the public sale, brought no more than £7 10s., and the average of the cargo not £7, and other spruce cargoes from the Gulf of St. Lawrence averaged about £6 10s. With these prices on a backward importation it can scarcely be expected that better terms will prevail later on. There were, however, two causes assigned for the disinclination of buyers to accede to an advance of price—one that "the lower port cargoes were somewhat discoloured," the other, that buyers were discouraged by the bad harvest prospects. For ourselves we do not attach importance to either in this case ; most likely the plentifulness of the stock on hand and the knowledge that a good many spruce cargoes are on their way to Liverpool were the real checks to more liberal dealings. Waney board timber, of which the stock on hand is nearly double what it was last year, found no buyers at the reserve on it—this, too, in the face of a rising market at Quebec. In contrast with the state of the importation for the same week in London, we may point to the fact that more firewood was imported there than the total bulk of wood into Liverpool, over thirty cargoes of firewood besides oddments arrived in the Thames during that week, bringing altogether more than 5,550 fathoms (above 23,970 loads). Possibly with the next strong puff from the westward the arrival of transatlantic timber ships in Liverpool will render the contrast less remarkable, but on the other hand, as the demand is already scarcely equal to the supply, which means that the commodity is too abundant to admit of much margin to the vendor, with large arrivals it will be still more difficult to obtain a profit. * * * We may therefore look forward to a rather full importation during the fall. Nor, after the bound forward which the trade has made in that department since the present month commenced, will anyone be surprised if the tot-up at the end of this year should find the United Kingdom quite as well supplied with foreign and colonial timber as it was at the termination of the last.

Swedish Enterprise.

The *Timber Trades Journal* says :—It is reported that, in view of the development which the trade in wood goods from the north of Sweden to Australia is taking, several of the Swedish shipbuilders, who have hitherto been occupied in building wooden ships, are preparing to lay down iron ships instead, the advantages of the latter class in carrying capacity, &c., more than making up for higher first cost. There is no doubt a considerable field of employment open to tonnage of this class, and which can be much easier worked than steam tonnage, from the north of Sweden ; but it is, however, liable to be ousted out of the return freight and other goods from Australia by steam, however remote this contingency may appear at present. Iron shipbuilding at Gothenburg, Malmo, Oscarshamn, and Stockholm is active, and an increase in the size of the vessels is observable. Steamers of 3,000 tons burden are now being built at Malmo for Copenhagen firms, to run between that lively Danish town and the United States with emigrants and goods.

Boiler Explosions.

A Canadian mechanical engineer, named Arnoldi, has invented a device designed to give a partial security against boiler explosions. The invention consists of an electric adjustable attachment to the ordinary steam guage now in use, to give an instant and continuous alarm, at any distance from the boilers or other pressure generators, of any excess of pressure over that at which the alarm has been set, and where there is more than one generator in operation, an ordinary "tell tale" can be attached to signify which generator is at fault. The invention possesses a great many valuable features, prominent among which may be noticed that it is extremely simple and inexpensive, and can be attached to existing arrangements at no expense beyond that of the alarm itself, and without in any way affecting the present adjustment of the guage.

Fire Proof Shingle Roofs.

Spon, for this purpose, recommends a wash composed of lime, salt and fine sand or wood ashes, to be applied as in putting on a coat of whitewash. This coating, he adds, will render an ordinary shingle roof fifty-fold more safe against fire from falling cinders in case of a neighboring fire, than one without it. He adds, also, that it will have a preservative effect on the shingles, protecting them against rotting from exposure to the weather, and against warping, and states that the older and more weather-beaten the shingles are the more benefit they will derive from this application. He recommends, finally, that a small quantity of lampblack be mixed with the wash, to give the coating a darker color, thus avoiding the offensive glare of a white-washed roof.

The ancient orders of architecture are the Tuscan, Doric, Ionic, Corinthian and Composite. The five leading pens of Esterbrook's make are the Falcon, Bank, Engrossing, Extra Fine and School.

Chips.

THE Chippewa, Wis., Lumber & Boom Co.'s mill, in two days last week, sawed 856,000 feet of lumber, in an actual running time of twenty-two hours.

THE Empire Lumber Company, of Winona, will erect a new mill that "will occasion the expenditure of about $100,000 in the further development of the manufacturing interests of Winona."

THE state of New York has not escaped devastation by forest fires. A tract twenty miles in diameter near Carthage was burned over, the estimated loss of timber lands being three hundred thousand dollars.

THE Orillia *Packet* says :—On account of the lowness of the water the Severn mills have been cutting rather below the average. Should we not get very heavy rains soon the probabilities are the mill will be stopped.

THE building trade is showing signs of activity in Bristol and the West of England. Masons and carpenters are more busy than they have been for the past two years, and there is a decided improvement in the demand for timber.

THE St. Croix, Wis., boom has been closed for the season. A little over 200,000,000 feet of logs have passed through since navigation opened. The Stillwater *Gazette* says the total amount got out this season exceeds that of any year in the history of the boom.

SANDS & MAXWELL, of Pentwater, Mich., have shipped to C. C. Thompson & Co., of Chicago, a clear pine plank, sixteen feet long, forty inches wide and four inches thick. The same firm has also shipped one of the same size and grade to the St. Nicholas Toy Company.

FROM a tabular statement in *L'Echo Forestier* we gather that fifty-four vessels entered the port of Dieppe, France, during the month of August, with timber cargoes, the greater number arriving from Hernosand and Sundswall (Sweden), Riga and Kotka (Russia).

AT the French seaport town of Honfleur they cannot be said to be protectionists in the timber sawing business. Instead of only raw wood being sent them as formerly, to be worked up, a great deal of timber is now brought already worked, to the detriment of many Honfleur saw mills.

C. L. STINE, Bucyrus, Ohio, who has a mill four miles west of that town, has sawed 1,500,000 feet of hardwood this season, and expects to add 1,000,000 to it by shutting down time. Walnut is worth $45 in that locality ; oak $20 ; ash $21—all right from the saw. The market is active, and the timber supply limited.

THE Chippewa, Wis., *Herald* says the Chippewa Lumber and Boom Company's mill has cut thus far this season, 41,000,000 feet of lumber ; 12,500,000 lath ; 200,000 pickets, and 9,250,000 shingles. It is estimated the mill will cut by the 10th of next month 50,000,000 feet. This is about 15,000,000 more than it has cut in any previous season.

SAMUEL JELLISON, of Belfast, and the spool factory company of Searsport, Me., have recently purchased a township, known as No. 4, in range 8, in the north part of Penobscot county. The township contains 33,000 acres. The east branch of the Penobscot river, and a tributary, run through the township, affording excellent opportunities for logging. The forests are largely white birch, which is the material used in the manufacture of spools. A large gang of workmen are now on the grounds getting out spool stock.

WHEN the Stillwater, Minn., boom was shut down on account of the recent high water, over 220,000,000 feet of logs had passed through during the season thus far. The total amount got out this season exceeds that of any year in the history of the boom, the largest run heretofore, which occurred about five years ago, having been 204,000,000 feet. At a meeting of the Lumbermen's Board of Trade held recently, it was decided to send a crew of men, under charge of James Rooney, to Taylor Falls, with instructions to bring down every log between that point and Stillwater. This, it is said, will make the cleanest sweep ever known.

FIVE ACRES OF LUMBER BURNT.

The Oswego *Palladium* gives the following graphic account of the appearance of the recent conflagration in that city :—"We are sure that none who saw this picture when the fire was at its height ever saw a grander or more impressive of the kind. About five acres of lumber all in a blaze, fanned by a gale of twenty miles an hour, makes an elemental combination seldom seen. Seizing on a lumber pile the fire would wrap it in an instant and pour from every interstice from top to bottom a devilish looking blue flame, which streamed from the cracks in a sheet resembling molten metal forced out under high pressure. There were, as said, about five acres of these mighty forges, all flaming at once. and when they lost their individual forms and settled down into less shapely heaps they glowed and fused like ores. Apart from the sense of danger and damage going on, it was a stupendous spectacle. The reflection of the fire lighted the cloudy sky with a sickening glare which had an awful look, and for miles around the country was lighted up almost as by the sun at noon. Throughout the towns of Oswego and Scriba the people were awakened by the unearthly light, and looking toward the city believed it to be all on fire. Many hitched up their teams and drove to town, and several carriages came down from Fulton, where the fire looked as if the whole city were involved."

How Forests Pay in Scotland.

A writer in an English journal says that there have been forests in the neighbourhood of Darnaway for many centuries. The oak forest of Darnaway, which, by the way, is the seat of the Earls of Moray, is acknowledged to be the finest in Scotland, and there are few which can compare with it anywhere in the British Isles. For over a century the oak produced from this forest, which is over 3,000 acres in extent, has attracted attention all over the north of Scotland, and ship-builders and wheelwrights from all parts annually attend the sales. As early as the latter years of the last century the thinnings brought $5,000 per annum, and between 1830 and 1840 the sale of timber and bark ranged from $20,000 to $25,000 yearly. Owing to the low price of both wood and bark, not so much has been cut lately as in former years, but notwithstanding the way it has been reserved, it is said that after paying every expense during the growth of the timber, the revenue of the forest per acre has been double that of the finest arable land in the country. Some idea of the extent of the forest, including the oak and pine woods, may be gathered from the fact that in order to make a tour through them a walk of twenty-six miles has to be engaged in.

THE Menominee, Mich., *Herald*, in mentioning the slabs and edgings that are being shipped from Saginaw to Chicago, says that the amount of this kind of material destroyed in the burners at Menominee daily would supply a large city with wood steadily. Thousands of cords of edgings are consumed, with other refuse, every season, which if it could be "dropped" in a city like Chicago, would keep thousands of families in fuel the year round. It seems unnecessary to waste so much wood in order to get rid of it, and that, where mills are situated on navigable water, this waste might be profitably shipped for fuel.

MESSRS. GEMMELL, TUCKETT & Co., in their monthly timber report, dated Melbourne, August 1st, state :—The amount of business carried through during the month has been fully up to the average, and prices have been sustained.

AMERICAN LUMBER.—Market quite bare of w. p. t. and g. ceiling and shelving, and stocks of clear pine are lower than for years past. The only sales were ex *Harvard*, 43,510 ft. wide w. p. shelving, £11 10s. to £11 5s. per M super ; 4,819 ft. 5¼×1¼, 6×1¼, t. and g. pitch pine (including tongue), 11s. 3d. per 100 ft. lineal.

ZOPESA.—A healthy man never thinks of his stomach. The dyspeptic thinks of nothing else. Indigestion is a constant reminder. The wise man who finds himself suffering will spend a few cents for a bottle of *Zopesa*, from Brazil, the new and remarkable compound for clensing and toning the system, for assisting the Digestive apparatus and the Liver to properly perform their duties in assimilating food. Get a 10 cent sample of *Zopesa*, the new remedy, of your druggist. A few doses will surprise you.

The Ottawa River.

An exceptional, not to say extraordinary, lowness of water in the Ottawa River at the present season affords a good opportunity for examining the bed of the stream, and becoming acquainted with hitherto hidden dangers to navigation. All along the river between the Chaudiere and Grenville, rocks and reefs, whose very existence was unknown, have appeared above the surface of the water. Opposite Ottawa three new islands are laid bare, and further down a most dangerous sharp pointed rock has appeared in McLaren's Bay. At various parts on the shores similar obstructions are now conspicuous.

These facts, we should think, ought to induce the Government to take steps for clearing the river of the worst, at least, of these rocks and reefs. A proposition, noted in these columns the other day, has been made to erect a dam at Grenville, and we hope it will receive favorable consideration by the Department of Public Works. But it is equally important to remove obstructions as it is to keep up the level of the water, and, as the season offers exceptional advantages, no time should be lost. A very small outlay, comparatively speaking, at the present time would be of the greatest advantage, and, perhaps, save both life and property hereafter. —*Free Press.*

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Two Planers for sale or exchange for a Boiler. b26

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Wholesale Lumber Dealers
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We have for Sale a large quantity of PINE, OAK, WHITEWOOD, ASH, CHESTNUT, CHERRY, BUTTERNUT, BASSWOOD, &c.
☞P.S.—A SET OF TUB MACHINERY FOR SALE, CHEAP—OR EXCHANGE FOR LUMBER. 1yL16

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WISDOM & FISH
IMPORTERS AND DEALERS IN
Rubber and Leather Belting
RUBBER HOSE, STEAM PACKING,
LUBRICATING OILS, COTTON WASTE
Wrought Iron Pipe and Fittings,
And all Articles used in the Application of Steam to Machinery.
No. 41 Dock Street, St. John, N. B.
(SMALL'S BLOCK.)
N.B.—Estimates for Steam and Hot Water Heating Apparatus furnished on application. All work Warranted. 1y-L20

Flexible Board Rules,
With Steel Head, either Cleveland or London make, at $1.75 Each.
GEORGE STETHEM,
PETERBOROUGH. L16

J. G. EDWARDS
HARDWARE MERCHANT,
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BELTING, FILES, BABBIT METAL,
1y CHAINS, ROPE, and L17
LUMBERING SUPPLIES.

WANTED.
Cherry, White Ash, Black Ash, and Dry White Pine Lumber.
Quote Price delivered, and Carefully Describe :—Quality, Widths, Length, Thickness, and how long Sawed.
ROBERT C. LOWRY,
Wholesale Lumber,
12L19 55 Pine Street, New York.

SAMUEL WINDRIM,
MANUFACTURER OF
Agricultural Implements, Etc
MILLBROOK, ONTARIO.
HAVING DISPENSED WITH THE SERVICES OF AGENTS, I take this opportunity to bring to the notice of intending purchasers of Reaping Machines, that I have now on hand a quantity of the Celebrated
HANLAN REAPER,
which has NEVER BEEN BEATEN YET, and am prepared to allow the Agents commission—FIFTEEN PER CENT—on all purchases. L17tf

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AND
MACHINE SHOP
CRAIG & CAMERON, Proprietors.
The undersigned beg to announce to the public that they are prepared to make all kinds of Mill and Steamboat Brass and Iron Castings.
All kinds of PLOW CASTINGS kept on hand. Plow Points and Landsides a specialty.
We have first-class machinery and are prepared to do all kinds of TURNING or PLANING on short notice.
We hope by strict attention to business and moderate charges, to merit a share of the public patronage.
☞All work guaranteed.
G. A. CRAIG.
1yL17 C. CAMERON.

FOR SALE.
The Dexter & Whitwam Manufacturing Company, offer for Sale the Entire
Real Estate Plant and Machinery
OF THEIR EXTENSIVE
BENDING & TURNING FACTORY
Situated in the City of St. Thomas, in the County of Elgin, Ontario. For full particulars apply to H. BROWN, Manager, or E. MOORE, President. L20tf

J. T. LAMBERT,
Lumber and Commission Agent.
FOR SALE.

150	Mlls.	White Pine,	1 x 10 Stock.
175	"	do	1 x 12 "
11	"	do	2 x 10 "
20	"	do	2 x 12 "
140	"	do	1 inch Siding.
20	"	do	1¼ "
40	"	do	2 x 10 Joists.
16	"	Cedar,	3 x 6 "
19	"	Basswood,	1¼ inch.

APPLY AT THE OFFICE, L20
WELLINGTON STREET, OTTAWA.

Market Reports.

MONTREAL.

From Our Own Correspondent.

SEPTEMBER 26.—Since the date of our last report the shipping of lumber has almost ceased. The shipment to South America was only one cargo to Buenos Ayres, consisting of 535,669 ft; to Cardiff, 9,007 pieces; to Cardiff, 129,000 feet. Lumber stocks here of all kinds are very low, both of sawn lumber and round logs; as a consequence prices are very stiff, and, water being so low, higher prices are expected very soon, at all events as soon as navigation closes. We do not at present alter our quotations, but outside figures for the most part rule. We still quote as under:—

Pine, 1st quality, ₱ M.	$32 00@40 00
Pine, 2nd " ₱ M.	18 00@24 00
Pine, shipping culls, ₱ M.	12 00@15 00
Pine, cull deals, ₱ M.	8 00@10 00
Pine, mill culls, ₱ M.	5 00@ 6 50
Spruce, ₱ M.	8 00@10 00
Hemlock, ₱ M.	8 00@10 00
Ash, run of long culls out, ₱ M.	16 00@18 00
Bass, " ₱ M.	14 00@16 00
Oak, ₱ M.	35 00@45 00
Birch, ₱ M.	17 00@20 00
Hard Maple, ₱ M.	18 00@25 00
Lath, ₱ M.	1 25@ 1 35
Shingles, 1st, ₱ M.	3 00@ 0 00
Shingles, 2nd, ₱ M.	2 00@ 0 00

The total shipments since the opening of navigation to date were 7,848,475 feet, against 4,319,278 feet for the same period of last year, being an increase of 3,529,197 feet. Advices from Ottawa report that many of the mills in the Chaudiere, owing to want of logs, want of water preventing their getting the logs to the mills, have been obliged to shut down, so that everything here looks for considerably higher figures in the near future.

In cordwood there has been considerable activity, and holders are making strenuous attempts to enhance values, but in the meantime ready money makes a little difference in their views. We continue to quote as under, at which some pretty fair transactions are transpiring. We quote:—

Red Tamarac	$ 4 50@ 5 00
Hard Maple	5 50@ 6 50
White Birch and Soft Maple	5 00@ 0 00
Red Birch	5 50@ 6 00

Later.

OCTOBER, 10th.—There is a general complaint among the lumber merchants here of the difficulty of getting down lumber, owing to the lowness of the water, and as a consequence prices are very firm; but as the demand for building lumber has not been very brisk, prices can hardly be said to be quotably higher. Shipments since the date of our last report have been very small, indeed they have almost ceased. To Cardiff 85,140 ft. have been shipped; to Liverpool, 23,314 pieces of deal boards and ends, and 155 pieces of oak; to Buenos Ayres, 539,148 ft. The total shipments to the River Platte since the opening of navigation to date were 8,387,623 ft., against 5,751,434 ft. for the same period of 1880, showing an increase of 2,636,189 ft. The quotations remain the same as in my last epistle.

CORDWOOD.—There have been some large contracts entered into for long maple, at $7.50, delivered. The prices on the wharf, ex cartage, are long maple, $7.00; short do., $6.50; long birch, $6.50; short do., $6.00; long beech, $6.00; short do., $5.50; tamarac, $4.50. The demand for cordwood is better, and prices are very firm.

TORONTO.

From Our Own Correspondent.

OCTOBER 8th.—The block in lumber at this port continues much the same as when I last wrote you. When passing over the dock yesterday the writer estimated that nearly 3,000,000 feet of lumber, including that standing on the cars, was awaiting shipment, and at the time of writing this there is not one foot of available space left on any of the docks belonging to the H. & N. W. R. Co., and at the present time only one small vessel loading at the wharf. Lumbermen have had a hard time of it this season; what with scarcity of cars, fighting bush fires, burning of mills, and difficulty experienced in getting the lumber away after its arrival here, their lot has not been a happy one, and the season being now so far advanced, the anxiety of shippers to forward their lumber to its destination is quite excusable.

During the last three weeks large quantities of cedar ties have arrived here for shipment. Messrs. Rathbun & Son have purchased largely in this line north of this city, and are now shipping them to the American market. Two years ago $13.00 per hundred was the ruling price for ties loaded on the cars; $18.00 per hundred is the price now being paid, so that owners of tracts of cedar are beginning to realize that they have quite a bonanza. The contractors for the cedar block pavement in this city have now had to suspend work until spring, on account of the scarcity of cedar suitable for their purpose.

The scarcity in bill lumber still continues, and builders have frequently to visit all the yards in the city before procuring sufficient to meet their wants, and in many cases have found it impossible to get their orders filled, and yet in the face of this famine for dimension stuff, prices still hang at the old figures, and lumbermen are missing a good chance to raise their tariff of prices, simply for the want of a mutual understanding with each other on this and other matters equally important to the trade.

The 20 per cent. advance on R.R. freights has now become an established fact, and it is announced that the Railway Company repudiate special arrangements made prior to the advance in rates, but, to say the least, it is questionable if railway corporations have the power in their hands to grant special rates to certain individuals. It certainly seems unreasonable that one man or firm should have their lumber brought from any given point for three or four dollars per car less than some other men or firms, doing business at the same place. Yet such is, no doubt, the fact, but it is done in this way, in order to make it colorable, all bills for freight from all stations are made out at the same figure, and the favored ones get a rebate by applying at headquarters. This enables such persons to undersell their neighbors fifty cents per M., or else make that much higher profit. A more unjust method of doing business it would be hard to name. In such cases the smaller fry are at the mercy of the larger fish, as fifty cents per M. in times of close competition, and in sales devoid of risks, would be a fair living profit, especially if the sales were made in large quantities.

Shingles are somewhat more plentiful, and remain at the same figure retail, but considerably lower wholesale on rail or vessel, $2.40 to $2.45 being the ruling figures for 16-in. XXX shingles, F. O. B. vessel here. Sawn lath are in good demand, and less plentiful than formerly, and as the season's work comes nearer to its close, lath will likely advance in prices. Butternut is in excellent demand, and a good article will bring a good figure, especially if cut into 2, 3 and 4 in. plank, or 6×6 and 8×8, and any parties having dimension stuff, say 2×8, 2×10, 2×12, and 20 and 22 ft., will meet with ready sale, and at good prices, on this market, as nine-tenth sof all shipments arriving here are comprised of mill cull, and shipping cull boards. Sound stock boards and good lumber find their way over the docks, leaving little but coarse boards for the local trade. Black ash lumber of good quality will command ready sale here at present. Many people are now only beginning to find out the value of this wood for finishing purposes, and yet hitherto a building could be finished with this wood at less cost than when finished with good pine, and its appearance, when oiled, is much preferrable to pine when painted, and its lasting qualities, in dry situations, nearly equal.

Building continues as briskly as ever, and it may serve to convey some idea of the large amount of lumber being used in this city when I state that the firm of J. & F. N. Tennant alone are reported to have sold about 1,000,000 ft. on the local market during the past month, and this amount sold mainly to consumers, and this would certainly not be more than the one-tenth of all the lumber sold to consumers during that same period.

QUOTATIONS.

Mill cull boards and scantling	$ 9 00
Shipping cull boards, promiscuous widths	12 00
" stocks	13 00
Scantling and joist, up to 16 ft	11 50
" " " 18 ft	12 00
" " " 20 ft	12 50
" " " 22 ft	13 00
" " " 24 ft	13 50
" " " 26 ft	14 50
Scantling and joist, up to 28 ft	15 50
" " " 30 ft	17 00
" " " 32 ft	18 00
" " " 34 ft	20 00
" " " 36 ft	22 00
" " " 38 ft	25 00
" " " 40 to 44 ft	30 00
Cutting up planks to dry	18 00
" boards "	16 00
Sound dressing stocks	16 00
Picks Am. inspection	26 00
Three uppers, Am. inspection	34 00
1½-inch flooring, dressed	28 00
1½ " " rough	13 00
1¼ " " dressed	24 00
1¼ " " undressed	14 00
1 " " dressed	20 00
1 " " undressed	15 00
⅞ Beaded Sheeting, dressed	20 00
Clapboarding, dressed	12 50
XXX sawn shingles, ₱ M.	2 80
XX sawn shingles	2 80
Sawn Lath	1 65

LONDON, ONT.

From Our Own Correspondent.

OCTOBER, 10th.—There is a general talk of dullness in the lumber market here. It was at one time thought there would be a good demand spring up in the Fall, wood merchants generally were confident of this result, but it has not yet been realized, and, since my last, business has fallen off instead of increasing, as expected; there is, however, no grumbling, as all dealers seem to have enough to do, and appear satisfied. Prices, however, remain unchanged, which is a healthy sign.

As the Fall comes upon us building in this city narrows down to small limits, and there is nothing particular to note in this direction.

The Messrs. Green, whose extensive premises were almost completely destroyed by fire some time ago, are rapidly rebuilding, and they will be in working order again in a very short time. These premises will be of a more modern construction than formerly, and built with a view to evade any sudden attack of fire.

Mr. G. C. Hargreaves has effected a compromise, and the estate is being wound up. Meanwhile Mr. Hargreaves himself is employed in this market by a large wholesale Toronto firm.

The lumber coming in here is principally by the G. W. R. There are great complaints of the G. T. R. not having sufficient car accommodation for the requirements of the trade.

I must report the lumber market dull in this city, but prices rule about the same as given in my last.

QUOTATIONS.

Mill cull boards and scantling	$10 00
Shipping cull boards, promiscuous widths	11 00
" " 10 and 12 in. stocks	11 50
Common boards, promiscuous widths	13 00
Scantling and joist, up to 16 ft	14 00
" " " 18 ft	14 50
" " " 20 ft	15 50
" " " 22 ft	16 50
" " " 24 ft	18 00
Common stocks	14 00
Common 2 in. plank	13 00
Cutting up plank and boards	18 00
Sound dressing stocks	17 00
Clear and picks	31 00
Three uppers, Am. inspection	35 00
¼ inch dressed and matched flooring	20 00
¼ " " " "	20 00
1 " " " "	20 00
XXX sawn shingles, ₱ M.	3 00
Lath per 1000 feet	4 00

ST. JOHN, N. B.

From Our Own Correspondent.

DEALS.

Reference was made in our last report to the efforts being made to complete the loading of ships then in port, by the 1st inst., to secure their deck cargoes. Those efforts were quite successful, the result being to greatly reduce the dimensions of our fleet, as well as to exhaust our stock of deals. Probably the stock of deals here is less than it has been for more than a quarter of a century, and as the country mills are mostly idle, the prospect is that the quantity wintered here will be scarcely worth counting.

FREIGHTS.

The freight market is remarkably quiet; scarcely any tonnage offering, and but little wanted. The only recent transaction reported is the *Champion*, 799 tons, for Liverpool or Bristol Channel, at 57s. 6d., which may be considered about the market rate. Owners are talking of 60s., but considering the great scarcity of deals, it is doubtful if this can be obtained at present.

VESSELS IN PORT.

The following is a list of the vessels in port, with their tonnage and destinations:—

Anna P. Oddell, 379, Glasgow.
W. D. Wallet, 1413, Melbourne.
Malville, 924, Melbourne.
Stanley, 542, France.
C. E. Robinson, 531, Cork Quay.
Eleanora, 1049, United Kingdom.
Adept, 1102, Liverpool or London.
Windward, 607, Rio Janeiro.
E. Sutton, 545, repairing.
Kilverdale, 1190, Liverpool or London.
Salacia, 797, ——
W. Dickinson, (s), 1350, Liverpool, London, Fleetwood or Bristol Channel.
Champion, 799. Liverpool or Bristol Channel.
Lalia, 391, ——
Sovereign, 332, Wexford.
Teddington, (s), 1310, discharging.

SHIPMENTS.

The shipments of deals and other sawn lumber are as follows:—

For Europe	18,593,000 Sup. feet.
" United States	3,106,000 "

October 7th, 1881.

From Another Correspondent.

SHIPPING.

OCTOBER 8th.—The fleet has been considerably reduced since our last, as quite a number of vessels cleared on the 1st of October, in order to get away before the deck load law came into operation. Under this law no vessel clearing after the 1st of October can take more than three feet of a cargo on deck, which of course materially reduces the amount of freight.

English freights are not materially changed. We hear of one charter at 65s. 6d. to the Bristol Channel. Of the two steamers in port, one is unchartered at present, and the other has been taken for U. K. at private terms, said to be 55s.

Coastwise freights are about as before quoted, and $2.25 can be readily obtained for Boston. We are aware of one charter for Boston of a load of sleepers, at 14½ cents, which is really better than $3.00 per M., but this is an exceptional case.

OUR LUMBER EXPORTS.

The following is a statement of the clearances of lumber at the port of St. John, N.B., for transatlantic ports for September, 1881. During the month 32 vessels, having a total of 22,573 tons, were loaded with:—

Deals, battens and ends	20,491,226 sup. feet.
Boards and scantling	697,971 "
Pine timber	37 tons.

We also give the shipments of lumber at the port of St. John, N.B., for transatlantic ports, from 1st. Jan. 1881, to Oct. 1st., 1881:—

Deals, battens and deal ends	154,485,379 sup. feet.
Boards and scantling	4,899,184 "
Palings	284,965 pieces.
Pine timber	806 tons.
Birch	3,609 "

Logs are scarce and holders are not desirous of selling. About 300,000 feet of unmarked superior logs were sold in the boom at $8.00.

The English market remains fairly satisfactory, and at the present time the stock in Liverpool is not excessive, so that dealers can command good prices.

The American market is also tolerably remunerative. In Boston we can quote $13.00 to $14.00 for good wide spruce boards; laths at $1.75 to $1.87½. In New York laths have in some cases reached $2.00, but the majority of sales have been at $1.90.

Oct. 8th, 1881.

ALBANY.

OCTOBER 4.—The *Argus* says the demand for the past week has been largely in excess of the preceding, and the attendance of buyers better. A sale of a million and three-quarters to a Brooklyn firm is among some of the purchases we hear of. The scarcity of certain pine grades specially sought after for manufacturing purposes is being felt, and it is apparent the "cry of wolf" is not without reason, as we hear of a prominent Michigan manufacturer shipping box direct from the saws to vessel. The lower grades of pine lumber have been sold, no doubt, too low, considering the yearly decreasing percentage of the better grades, and we see lighter stock here to-day than for years past, which no doubt will produce an effect on prices during the short business season that remains. Vessels from Canadian ports are difficult to get, and the rates asked very high. The northern mills are working with a fair supply of water.

The receipts of lumber by lake at Buffalo for the week ending Oct. 3rd were 8,660,000 feet and by rail 80 cars. The receipts by lake at

Oswego for the week, as far as reported, were 6,266,480 feet.

The receipts by canal at Albany from the opening of navigation to the 1st Oct. were :—

	Bds. & Sctl.,ft.	Shingles,m.	Timber,ft.	Staves,lbs.
1881....	313,989,000	5,516	1,000	6,105,000
1880....	289,493,800	3,872	5,400	638,200

Freights from Bay City to Buffalo and Tonawanda, $3.00 ₱ M.; from Saginaw, $3.25. From Tonawanda to Albany, $2.65. From Oswego to Albany $1.75. From Port Hope to Oswego, $1.25. From Ottawa to Albany, by boats, $3.00 ₱ M. feet.

River freights are steady :

To New York, ₱ M ft....	$ @1 00
To Bridgeport....	@1 37½
To New Haven....	@1 37½
To Providence, Fall River and Newport....	2 00@2 25
To Pawtucket....	2 25@2 50
To Norwalk....	1 25@1 30
To Hartford....	@2 00
To Norwich....	@2 00
To Middletown....	@1 75
To New London....	@1 75
To Philadelphia....	@2 00

Quotations at the yards are as follows :—

Pine, clear, ₱ M....	$53 00@63 00
Pine, fourths....	48 00@58 00
Pine, selects....	43 00@53 00
Pine, good box....	15 00@30 00
Pine, 10-in. plank, each....	00 38@00 42
Pine, 10-in. plank, culls, each....	00 00@00 22
Pine boards, 10-in....	00 26@28 00
Pine, 10-in. boards, culls....	00 18@00 19
Pine, 10-in. boards, 16 ft., ₱ M....	25 00@30 00
Pine, 12-in. boards, 16 ft....	25 00@30 00
Pine, 12-in. boards, 13 ft....	28 00@30 00
Pine, 1¼ in. siding, select....	00 00@42 00
Pine, 1¼-in. siding, common....	16 00@19 00
Pine, 1-in. siding, select....	00 00@42 00
Pine, inch siding, common....	16 00@19 00
Spruce, boards, each....	00 00@00 16
Spruce, plank, 1¼-in., each....	00 00@00 20
Spruce, plank, 2-in., each....	00 00@00 30
Spruce, wall strips, each....	00 11@00 12
Hemlock, boards, each....	00 00@00 13
Hemlock, joist, 4x6, each....	00 00@00 31
Hemlock, joist, 2¼x4, each....	00 00@00 13
Hemlock, wall strips, 2x4, each....	00 00@00 10
Ash, good, ₱ M....	38 00@45 00
Ash, second quality, ₱ M....	25 00@30 00
Cherry, good, ₱ M....	60 00@70 00
Cherry, common, ₱ M....	25 00@35 00
Oak, good, ₱ M....	38 00@43 00
Oak, second quality, ₱ M....	20 00@25 00
Basswood, ₱ M....	25 00@28 00
Hickory, ₱ M....	36 00@40 00
Maple, Canada, ₱ M....	26 00@30 00
Maple, American, per M....	25 00@28 00
Chestnut, ₱ M....	35 00@40 00
Shingles, shaved, pine, ₱ M....	0 00@ 6 25
" 2nd quality....	0 00@ 5 00
" extra, sawed, pine....	0 00@ 4 40
" clear, "	0 00@ 3 30
" cedar, mixed....	0 00@ 3 25
" cedar, XXX....	0 00@ 4 00
" hemlock....	0 00@ 2 25
Lath, hemlock, ₱ M....	0 00@1 62½
Lath, spruce, "	0 00@1 87½
Lath, pine, "	0 00@ 2 00

CHICAGO.

OCTOBER 5.—The *Northwestern Lumberman* says the Franklin street market since the date of our last report has been a very dull one, the dullest by all odds of anything which has been seen this year at that place. As will be seen by the figures below, the arrivals of lumber at this port have been very heavy during the week, and this presupposes a large supply of lumber upon the market. With the receiving docks crowded still, almost, or quite to their full capacity, with lumber purchased at the mills, which on its arrival went at once to the yard of the purchaser, it was a foregone conclusion that dealers would not exert themselves to any great extent to purchase lumber seeking a market, at least unless some inducement was offered them to do so. The inducement was accordingly offered, and from a weakness such as we chronicled last week, a decided decline must be noted at this time.

CARGO QUOTATIONS.

Joist and scantling, green, ordinary lengths....	$10 50@11 00
Joist and scantling, green, 20 feet and over....	12 00@15 00
Mill run, choice green....	16 50@21 00
Mill run, medium, green....	13 00@16 50
Mill run, common, "	11 75@13 00
Shingles, standard....	2 35@ 2 45
Shingles, extra A....	2 45@ 2 65
Lath....	1 85@ 1 90

LAKE FREIGHTS.

Manistee....	$2 37½@2 50
Muskegon....	2 00
Ludington....	2 12½@2 25
Grand Haven....	2 00
Menominee....	2 25
Sturgeon Bay....	2 25 @2 37½
White Lake....	2 12½
Ford River....	2 12½@2 25

Receipts and shipments of lumber and shingles for the week ending October 4 :—

	RECEIPTS.		SHIPMENTS.	
	Lumber.	Shingles.	Lumber.	Shingles.
1881....	67,021,000	25,376,000	45,430,000	35,665,000
1880....	62,643,000	21,664,000	41,307,000	20,686,000
Increase..	4,378,000	3,712,000	4,123,000	14,979,000

Receipts and shipments of lumber and shingles from January 1 to, and including, October 4 :—

	RECEIPTS.		SHIPMENTS.	
	Lumber.	Shingles.	Lumber.	Shingles.
1881.	1,403,739,000	611,831,000	1,365,913,000	640,940,000
1880.	1,147,377,000	497,921,000	1,126,209,000	538,788,000
In...	229,362,000	113,910,000	239,704,000	102,152,000

STOCK ON HAND SEPTEMBER 1.

	1881.	*1880.*	*1879.*
Lumber....	481,154,279	467,966,545	373,408,900
Shingles....	219,628,000	173,753,000	158,207,000
Lath....	37,556,000	48,755,681	29,770,495
Pickets....	2,030,210	2,193,317	1,140,632
Cedar posts....	256,235	67,006	463,939

OSWEGO, N.Y.

There is no change in quotations. Prices are firm, and the demand good. All lumber arriving in good condition finds ready sale. The docks lately stripped of stocks by the fire are rapidly filling up with newly cut lumber. The prospect for a good fall and winter trade never looked more promising than it does now. The receipts to date for the years named are as follows :—1880, 143,000,000 feet ; 1881, 124,000,000 feet. Lake freights from Lahe Ontario ports is $1.25 ; canal freights to Albany is $1.75, and to New York is $2,35. The following are the quotations :—

Three uppers....	$42 00@45 00
Pickings....	32 00@35 00
Fine, common	20 00@25 00
Common....	14 00@18 00
Culls....	13 00@15 00
Mill run lots....	17 00@22 00
Sidings, selected, 1 inch....	34 00@38 00
1¼ inch....	34 00@38 00
Mill run, 1x10, 13 to 16 feet....	18 00@22 00
selected....	23 00@28 00
shippers....	16 00@17 00
Strips, 1 and 1¼ inch mill run....	15 00@22 00
Culls, selected....	23 00@32 00
Culls	13 00@15 00
1x6 selected for clapboards....	25 00@40 00
Shingles, XXX, 18 inch, pine....	3 75@ 4 00
XX, " "	3 00@ 3 25
XXX, 18 inch, cedar....	3 00@ 3 25
XX, " "	2 25@ 2 40
Lath....	1 40@ 1 60

BOSTON.

OCTOBER 8.—The *Journal of Commerce* says advices from every hand show business to be fully up to expectations. For all classes of stock there is a good call, and values are very steady. Dealers report that some outside parties are endeavoring to cry down the market for the purpose of lowering prices. Holders are strong, however, and refuse concessions on regular grades in view of the healthy condition of the market and the prospects ahead. Cherry has improved considerably, during the week, in the way of demand. Ash has shown a better position than for some time past. Whitewoods are looking up. Prices on lumber generally are the same as last week.

CANADA PINE.

Selects, Dressed....	$48 00@50 00
Shelving, Dressed, 1sts....	40 00@42 00
" " 2nds....	33 00@35 00
Dressed Shippers....	27 00@29 00
Dressed Box....	18 00@20 00
Sheathing, 1st quality....	42 00@45 00
" 2nd "	34 00@35 00

TONAWANDA.

CARGO LOTS—SAGINAW INSPECTION.

Three uppers....	$40 00@45 00
Common....	17 50@20 00
Culls....	11 50@12 50

LIVERPOOL.

The *Timber Trades Journal*, of Sept. 24, says :—The import still continues moderate, and, as there is a fair and steady demand, prices continue firm, although it most be confessed that it is only by dint of hard work that sales are effected at the present rates. Consumers are loath to believe in reports of short supplies and high cost of production, and are inclined to withhold from making purchases, at any rate for the present, in the hopes that later on rates will be easier. Seeing that the import season is within a comparatively short distance of closing, with the consequent increased cost of freight and higher rates of insurance, it is difficult to understand by what mode of reasoning such an idea can be arrived at.

That this view is well developed was shown at Messrs. A. F. & D. Mackay's sale last Friday, where the attendance was limited in a marked degree and the competition tame and spiritless. One cargo of spruce deals offered at auction was withdrawn from the sale, owing to no bids being obtainable sufficiently high to warrant the auctioneer in proceeding, and it has since been sold in one line by private treaty at a good price. Of one cargo of St. John, N.B., deals only about one-half was sold, the remainder being withdrawn, sellers being very firm, and no doubt being strengthened in their position by the fact that the prospect of anything beyond a very moderate import being available for this year is becoming more evident every day.

Birch timber appeared in fair demand, and all that was offered was readily purchased.

The supply of this timber is likely to be small, especially for the better qualities, and should any of this description come down to the shipping ports it will probably be eagerly sought after. The sales by anction were as follow :—

Spruce deals, St. John, N.B.—

	£	s.	d.	£	s.	d.
16 to 21 ft. 3×11	7	15	0			
12 " 15 " 3×11	7	7	6			
9 " 11 " 3×11	7	2	6			
16 " 25 " 3×9	7	5	0			
12 " 15 " 3×9	7	2	6			
9 " 11 " 3×9	6	17	6			
9 " 11 " 3×7	6	12	6			
9 " 21 " 3×10	7	0	0			
9 " 23 " 3×8	6	15	0	to 6	17	6
9 " 23 " 3×6	6	15	0	" 6	17	6
Deal ends—	5	15	0			

Spruce deals, St. Margaret's Bay, N.S.—

9 to 22 ft.	3×9	6	17	6
9 " 24 "	3×8	6	10	6
16 " 26 "	3×7	6	17	6
12 " 15 "	3×7	6	15	0
9 " 11 "	3×7	6	12	6
Deal ends—		5	17	5

Birch timber, St. Margaret's Bay, N.S.—

22 in. & up.	23½d.
20 to 21½ in.	21d.
19½ "	19½d.
18½ to 19 "	18½d.
18 to 18½ "	16½d. to 17d.
16½ to 17½ "	16d.
16 "	15d.
15½ "	14¾d.
14½ to 15 "	14d.
14 "	13¾d.
13 to 13½ "	13d. to 13½d.
Under 13 "	12d. to 17½d.

GLASGOW.

The *Timber Trades Journal*, of Sept. 24, says :—There has been a very light import during the past week. The arrivals at Glasgow include a cargo of pitch pine planks, which goes into consumers' hands direct, being forwarded from ship's side per rail. There has been no import of wood at Greenock during the week. Several public sales have been held here, results of which are noted below.

On Tuesday, September 20th, a cargo of Tabasco mahogany was offered, the first direct import here since October last. A parcel of Italian walnut planks was exposed on the same day.

These sales were well attended and the bidding spirited. The Tabasco mahogany, a cargo of ordinary quality, was rapidly cleared off, the market evidently not fully supplied with mahogany.

On Sept. 21st. Messrs. Singleton, Dunn & Co. held a public sale of deals, &c., prices as undernoted. There was a good attendance, but buyers were evidently disposed to purchase sparingly for immediate wants, the demand by consumers meantime being rather languid.

Only a portion of the catalogue was sold ; prices, however, were fairly maintained. The birch and ash logs were withdrawn, offers not coming up to broker's views.

AUCTION SALES.

On Sept. 20th, at Glasgow, Messrs. Farnworth & Jardine, of Liverpool, brokers :—A cargo of Tabasco mahogany from Chiltepec and Santa Ana, consisting of 280 logs (96,000 sale feet), sold at 5½d. to 10d. per foot, averaging 6⅝d.

Messrs. W. Connal & Co. thereafter sold by auction a parcel of 155 planks of Italian walnut, at prices ranging from 4¼d. to 6¼d. per foot.

On Sept. 21st., at Glasgow, Messrs. Singleton, Dunn & C., brokers :—

St. John, N.B., spruce deals—

9 to 24 ft.	14/16×3	10½d.	cub. ft.
16 " 24 "	13×3	10¾d.	"
9 " 16 "	13×3	10½d.	"
9 " 24 "	12×3	10¾d.	"
17 & 18 "	11×3	11¼d.	"
9 to 13 & 6 to 19 "	11×3	11d.	"
9 " 24 "	10×3	11d.	"
9 " 23 "	9×3	11d.	"

St. John, N.B., square deals— cub. ft.

9 to 13 & 16 " 23 "	8×3	9¾d.	"
14 & 15 "	8×3	10d.	"
10 to 24 "	7×3	9¼d.	"

Do. spruce battens, 10 to 23 ft. 5/7×2½, 9½d. "
" " scantlings, 9 to 23 ft. 3/6×1½ to 3, 8¾. & 9d, cub. ft.
" " deal ends, 2 to 8 ft. long, 8d. "
" " boards, 4 to 20 ft. 3/9×1, 7d. "

UNION FOUNDRY

Union Street, - - - Carleton,

Warercoms, Water Street,

ST. JOHN, N. B.

Allan Brothers

(Late of Harris & Allen)

MANUFACTURERS OF ALL KINDS OF

Steam Engines

AND

MILL MACHINERY.

Ships Windlasses, Iron Capstans

and Ships CASTINGS of all kinds.

Ships Cambooses & Cabin Stoves

COOKING AND HEATING

STOVES,

Shop, Office and Parlor Stoves, and Franklins.

Agricultural Implemens.

BRASS CASTINGS.

Tin, Sheet Iron and Copper Ware for SHIP and HOUSE use.

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ELECTRICIAN,

4 QUEEN STREET EAST, TORONTO, ONTARIO.

Trusses for HERNIA, Rupture,

The most Durable and Beneficial kind known to Medical Science always in Stock, and fitted to the Body at Reasonable Prices.

BATTERIES FOR BATHS,

Of Special Sizes, made to order, both for Public and Private Use; and FARADIC BATTERIES always on hand. PRICES LOW. 1yL17

ROBIN & SADLER

594, 596, 598, St. Joseph St.

MONTREAL

Manufacturers of

LEATHER BELTING

Fire-Engine HOSE,

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Mill Supplies, &c.

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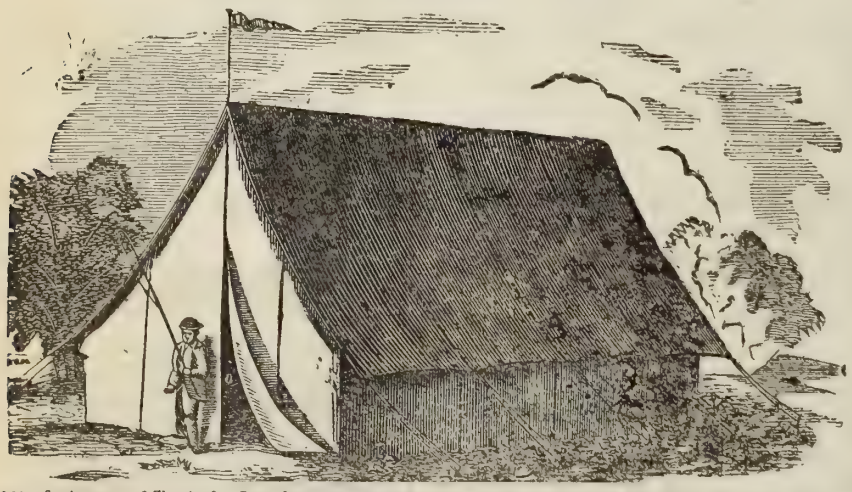
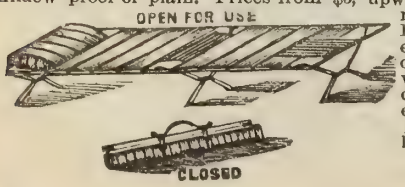


manufacturers of Tents for Lumbermen, Sportsmen, Camp Meetings, Photographers, Lawn and military Encampments, with or without extra roofs, all sizes and styles, white or fancy striped, mildew proof or plain. Prices from $5, upwards. Flags of all descriptions, (regulation sizes) made of the best of silk-finish bunting. CAMP BEDS (Bradley's Patent) the best bed ever invented; size when folded 2 x 6 in.; 3 feet long, weighing only 11 pounds, but strong enough to bear the weight of any man. Waterproof wagon and horse-covers, tarpaulins sheets, coats and leggings of every description made to order on the premises. Special rates to Lumbermen. Send for catalogue and price list to



NATIONAL MANUFACTURING CO.,
202 Sparks Street, Ottawa

b27

The Best Axes in the World!

Single, Double and Triple Steel, 28 Patterns.

Warranted Good or Exchanged.

And Burrell's, Warnock's, and Dundas Axes, made specially for the Lumber Trade, repacked any weights without extra charge. Lindsay Pattern of Broad and Blocking Axes. LANCE TOOTH SAWS, warranted good. P. Jewill & Sons (Hartford, Conn.) LEATHER BELTING. 2d CUT FILES. LATH YARN. Mill and Shanty Hardware. No. 1 LARD OIL. Heavy HAMES, BUCKLES and HARNESS TRIMMINGS. Ballard and other RIFLES, from $10 each. Large assortment of CARTRIDGES.

GEORGE STETHEM, Peterborough, Ont.

Importer, Jobber and Retail Dealer in Hardware. 12L17

Wrought Iron Shanty Cook Stoves

The Best Article ever offered to the Trade.

I have much pleasure in drawing attention to my **WROUGHT IRON COOKING STOVE, for Shanty, Hotel and Boarding House use.** These Stoves are made of **Heavy Sheet Iron,** the top and lining of the fire-box being of **Heauy Cast Metal** and all the connecting parts of substantial **Wrought Iron Work.** The dimensions of these Stoves are as follows:—

SINGLE OVEN STOVE

Top surface contains six 10-inch holes, with ample room between, and one oven 16 x 24 x 26.

DOUBLE OVEN STOVE

The Double Oven has a top surface containing twelve 10-inch pot holes, with two ovens, each 16 x 24 x 26. One fire-box of suitable size for area to be heated. Below will be found Testimonials from some of the leading Lumbermen, who have used my Wrought Iron Cook Stoves since I ommenced manufacturing them. They are the names of gentlemen who are well known and eliable, and will carry more weight than any recommendation of my own could do.

The Best Stove I have ever Used.

PETERBOROUGH, May 31, 1880.

ADAM HALL, Esq., Peterborough. Dear Sir,—I have used your Wrought Iron Cooking Stove in our lumbering operations since its introduction here, and have no hesitation in saying that I prefer it to any other. For durability, economy and efficiency, where a large number of men are employed, it is the best stove I have ever used. You can, with confidence, offer it to hotels, boarding houses and lumbermen.

Yours truly, THOS. GEO. HAZLITT.

The Stove for Lumbermen.

PETERBOROUGH, June 1st, 1880.

ADAM HALL, Esq., Peterborough. My Dear Sir,—We have used your Wrought Iron Cooking Stove and find it is very satisfactory for lumber operations, especially so on drives. We can recommend it highly.

Yours truly, IRWIN & BOYD,

Gives the Greatest Satisfaction.

PETERBOROUGH, June 3rd, 1880.

A. HALL, Peterborough. Dear Sir,—I have had the Wrought Iron Cook Stove, purchased from you, in constant use ever since last fall, and it gives the greatest satisfaction in every respect. I can recommend them highly to any one who is in the lumber business. Very truly yours, GEO. HILLIARD, M.P.

EVERY STOVE GUARANTEED

All the necessary TINWARE and CUTLERY for Shanties suppied at the Lowest Prices.

ADAM HALL, Peterborough.

HART EMERY WHEEL COMPANY, Limited

HAMILTON, CANADA.

GILBERT HART, Detroit, President. JAMES T. BARNARD, Hamilton, Secretary-Treasurer. SAMUEL BRIGGS, Hamilton, Superintendent.

MANUFACTURERS OF THE CELEBRATED

DETROIT

EMERY and CORUNDUM WHEELS

These Wheels are Wire Strengthened

And Specially Adapted For Saw Gumming

Neither Animal nor Vegetable Glue or Gum being used in their composition, they are NOT LIABLE TO HEAT, and give out no Odors, while

They Surpass All Other Wheels for Free Cutting and Durability.

We refer to the following well known Saw Manufacturers for Opinions as to the Quality of our Wheels :

Messrs. SHURLEY & DIETRICH, GALT.

Messrs. R. H. SMITH & CO., ST. CATHARINES.

JAMES ROBERTSON, ESQ., MONTREAL.

Messrs. JAMES ROBERTSON & CO., TORONTO.

WE ALSO REFER TO

WILLIAM HAMILTON, ESQ, PETERBOROUGH, Manufacturer of the Covell Saw Sharpeners.

Messrs. H. B. RATHBUN & SON, DESERONTO, Lumber Merchants.

JyL16

A. LEARMONTH & Co.

ENGINEERS AND FOUNDERS,

MANUFACTURER OF

Steam Engines, Rotary Pumps, of all sizes, for Paper and Pulp Mills, Steam Pumps, and a Variety of other Pumps, Propeller Engines for Yachts & Tow Boats.

L24-1y

Iron Railings, Hoisting Machines for Stores, Jack Screws, Park Mills, all kinds of Machinery for Mines, Saw Mills, Flour Mills.

St. Paul St., QUEBEC.

MILL SUPPLIES.

Extra Stretched and Patent Smooth Surface

RUBBER BELTING—in Stock, 2, 3, 4, 5, and 6 Plies.
HOYT'S CELEBRATED LEATHER BELTING.
COTTON BELTING, for Flour Mills. &c., Superior Quality.

DISSTON'S CELEBRATED MILL SAWS.

Steam Packing of all kinds, Rubber and Linen Hose, Silk Bolting Cloth, Emery Wheels, Lacing Leather (Page's Genuine), Lard, Seal, Cylinder, Spindle, West Virginia and Wool Oils. Our Stock includes Mill Supplies and Rubber Goods of all kinds. ☞Quotations furnished for any part of Canada. 21

ESTEY, ALLWOOD & CO., SAINT JOHN, NEW BRUNSWICK.

ROBERT W. LOWE,

AUCTIONEER AND COMMISSION MERCHANT,

81 SANDS BUILDING, PRINCE WILLIAM STREET.

Cash advanced on Goods put in for sale. ☞No Storage charged. All kinds of Merchandise Bought and Sold. New and Second-hand Furniture always on hand. Agent for Hazelhurst & Co's WINTHROP COOKING RANGES, WATERLOO WOOD STOVES, FRANKLIN, &c., &c., &c.

L22-1y **SAINT JOHN, NEW BRUNSWICK.**

ABRAMS & KERR

MANUFACTURERS OF

Steam Engines, Mill Gearing, Rotary Mills, Shafting, Planers, Hangers, Pulleys, Variety Moulders.

SPECIAL MACHINERY MADE TO ORDER

Latest Improved Spool and Bobbin Machinery.
Every Variety of Heavy and Light Casting.

L24-1y

Foundry and Machine Shop on City Road,
ST. JOHN, NEW BRUNSWICK.

Northey's Steam Pump Works

BOILER FEED PUMPS,
AIR AND CIRCULATING PUMPS,
STEAM FIRE PUMPS, and
WRECKING PUMPS.

MINING PUMPS,
PUMPS SPECIALLY ADAPTED for OIL PIPE LINES,
And CITY WATER WORKS.

No. 47 King William Street.

HAMILTON, ONTARIO.

SEND FOR CIRCULAR. L17-1y

LUMBERMEN'S STATIONERY.

We will supply anything in the line of BLANKS or STATIONERY for Lumber Shanties and Offices at City prices.

All Printing done in the Highest Style of the Art, and at Lowest Living Prices.

Book-Binding of every Description got up in a very Neat and Superior manner.

Account Books Ruled and Bound to any desired Pattern.

For Schedule of Prices address, describing the kind and quality of work desired,

TOKER & CO.,

"THE CANADA LUMBERMAN,"

PETERBOROUGH, ONTARIO.

DAVID JONES'

CELEBRATED

Cast Steel Table Cutlery!

Best Cast Steel, Warranted.

Edge Tool & Cutlery Works, Woodstock, N.B.

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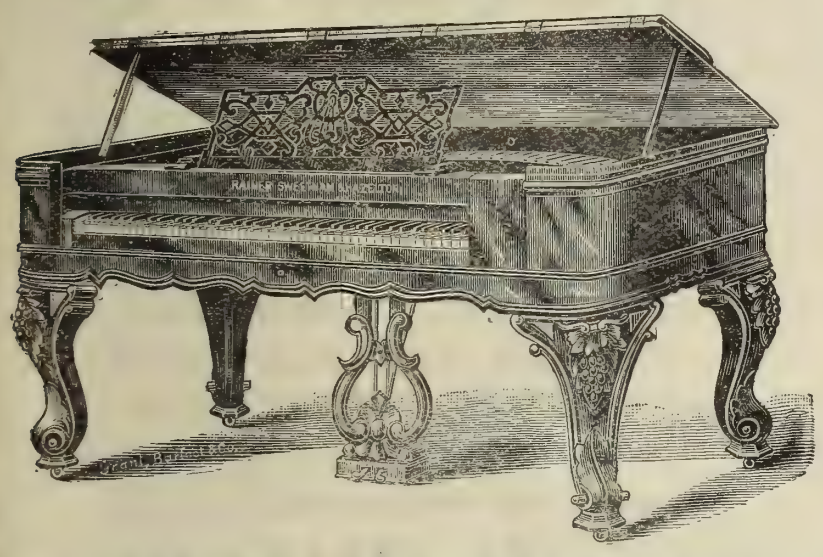
Awarded Diploma and Medal by the New Brunswick Government in 1873.



The Rainer Piano Always Triumphant!

CARRIES OFF THE HONORS OF 1880 AS FOLLOWS:

At Toronto Industrial Exhibition,	1st Prize, Diploma & Medal for Best Square Piano
At Hamilton Provincial Exhibition - - - - - -	1st Prize and Diploma
At Brantford Southern Fair - - - - - - -	1st Prize and Diploma
At Guelph Central Exhibition - - - - - - -	1st Prize and Diploma

SEND FOR CATALOGUE.

RAINER, SWEETNAM & HAZELTON,

MANUFACTURERS,

GUELPH, ONTARIO. L14

The Crowning Triumph of the Bell Organ

The Bell Organs have just received the HIGHEST AWARD and SPECIAL PRIZE (Gold Medal) at the International Exhibition, Sydney, Australia, this year for their Organs over all the English and American makers. This, along with the unlimited awards, prove that

THE BELL ORGANS LEAD THE WORLD.

WE RECEIVED
Medal and Diploma.....Provincial Exhibition 1871
Medal and Diploma.....Centennial Exhibition, 1876
International Medal and Diploma, Sydney, Australia, 1877

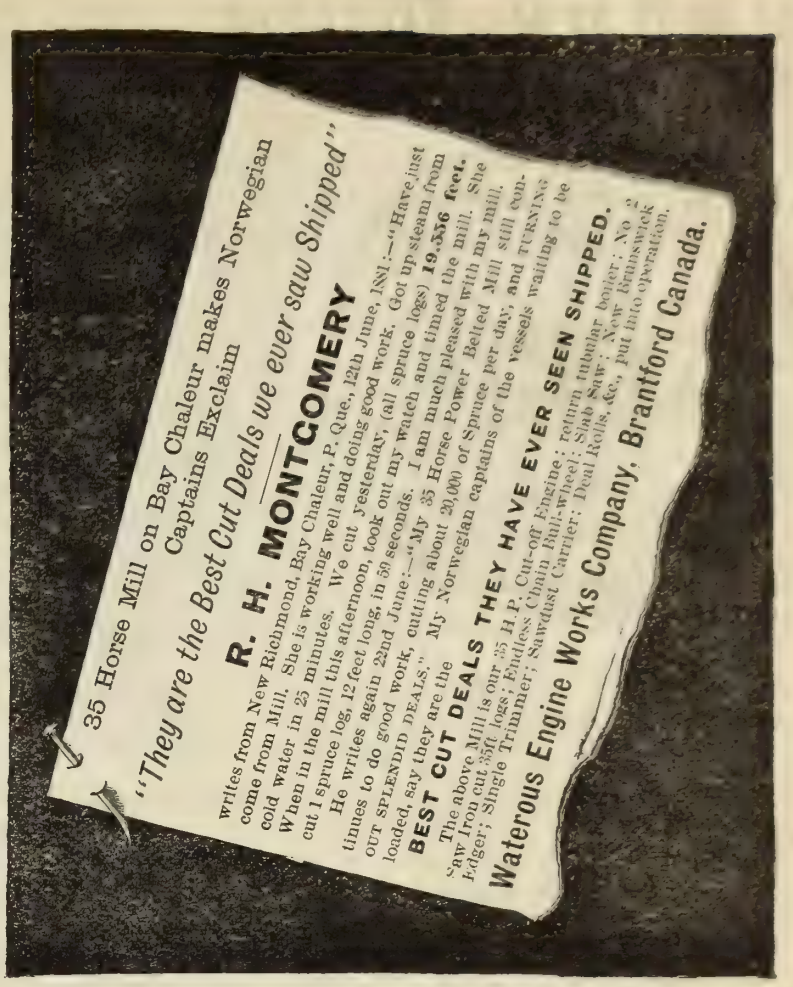
WE RECEIVED
Only Medal for Parlor Organ, Provincial Exhibition, 1878
Only Medal for Parlor Organ, Industrial Exhibition, 1879
And Gold Medal.....at Sydney, Australia, 1880

The Bell Organ Manufactory is the Largest and Oldest in the British Empire, and the fact that we have sold nearly 15,000 proves that they are the best in the market. We GUARANTEE ALL OUR ORGANS for five years. Correspondence invited. Illustrated Catalogue mailed free.

W. BELL & CO.

41 to 47 East Market Suqare, GUELPH, Ont.

L17



LUMBERMEN

Will always find a Large Stock of

Shanty Blankets

AND

HORSE BLANKETS

At LOWEST Mill Price, at

JNO. MACDONALD & CO'S

TORONTO.

Send Sample Order for our LINED SHAPED HORSE RUG, a Specialty, highly recommended for Wear and Warmth

6L22

EMERY WHEELS FOR SAW GUMMING!

EX INUTILI UTILITAS — TRADE TANITE MARK

Solid Emery Wheels are now almost in universal use for the purpose of gulleting and gumming saws. Statistics show from 25,000 to 30,000 saw-mills in the United States. Many of these run only a single saw each. A one-saw mill would use one or two wheels a year, costing $3 to $4 each, and when such small mills order single Emery Wheels from the factory, the express charges often equal the cost of the wheel. There was a time when the quality of Emery Wheels was so uncertain, and the demand so fickle, that storekeepers could not afford to carry them in stock. Now, however, Saw Gumming Wheels have become as staple an article as Files, and every dealer in saws, Hardware and Mill Supplies can afford to carry a few dozen standard sizes in stock. Large dealers order stocks of $500 to $750 worth at a time. Saw Gumming Wheels are used with the edge (or face) square, round or beveled. Probably seven-eighths of all in use are beveled.

The principal sizes are:

8x¼, 8x⅜, 8x½ } ¾ in. hole. 10x¼, 10x⅜, 10x½, 10x⅝ } ¾ in. hole. 12x¼, 12x⅜, 12x½, 12x⅝, 12x¾, 12x⅞ } Holes, ¾, ⅞ and 1 inch.

Probably more wheels 12x⅜, 12x½ and 12x¾ are used than all the other sizes together. Saw Gumming Wheels are used, however, of all sizes up to 24x1½. The most frequent complaint is that Emery Wheels harden the saw so that a file won't touch it. The answer is that you don't want a file to touch it. An expert workman will shape and sharpen the teeth with an Emery Wheel, leaving the teeth *case hardened*, in which condition the saw will cut about 33⅓ per cent. more lumber than a soft saw will. Those who want to use the file, however, have only to touch the saw *lightly* a second time (after going all over it once), and this second touch will cut through the case-hardened scale.

A QUESTION OF QUALITY.

Thirteen years of experience as makers of, dealers in, and actual users of Emery Wheels, have led us to a decided opinion as to what quality is the best. We prefer for almost every use an "Extra Soft" wheel like the "Pocono." We believe that money lost through the rapid wear of the wheel is more than made up by the money saved on wages. As we cannot get every one to adopt our views, we make several qualities, so as to meet their views. We say to those who think they can only be satisfied with some other make of wheels (not Tanite), that we can furnish qualities *to match* any and every other make. If you have got used to some special quality of wheel, let us know what it is, and we can send you *a Tanite Wheel of similar quality*. Our *regular* classification of Saw Gumming Wheels is as follows:

CLASS 2. MEDIUM—HARD.—This Wheel is THE STANDARD Saw Gumming Wheel all over the world. Probably seven-eighths of all the Saw Gumming Wheels used are "Class 2. It cuts fast and keeps its shape well. Some think it too hard, some too soft. We prefer the "Pocono."

CLASS 3. MEDIUM—SOFT.—The same as to coarseness and fineness as "Class 2," but a *softer*, and therefor freer cutting wheel.

CLASS "POCONO." EXTRA SOFT.—This Wheel we prefer to all others. It is both *finer* in grain and softer than either of the above. As a Saw Gumming Wheel, Class "Pocono" is specially suited to those practical and experienced Sawyers who know how to grind with a light touch, and who want a free cutting wheel that will not create much heat.

Illustrated Circulars and Catalogue, showing Cuts of Saw Gumming Machines, and Shapes, Sizes and Prices of Wheels, sent free on application.

L13

The Tanite Co. Stroudsburg, Monroe Co. Pennsylvania

CANADIAN TRADE SPECIALLY SOLICITED.

M. Covel's Latest Improved Automatic Saw Sharpener!

Is the Most Perfect Machine that has ever been Introduced into Mills for that purpose.

CIRCULAR SAW STEAM FEED!

I would also call special attention to my

Heavy Circular Saw Mills

and for STEAM MILLS, would recommend the Steam Feed, having put in several which are giving the best of satisfaction, as will be seen by the following testimonials:—

GRAVENHURST, August 20th, 1880.

WM. HAMILTON, ESQ., Peterborough.

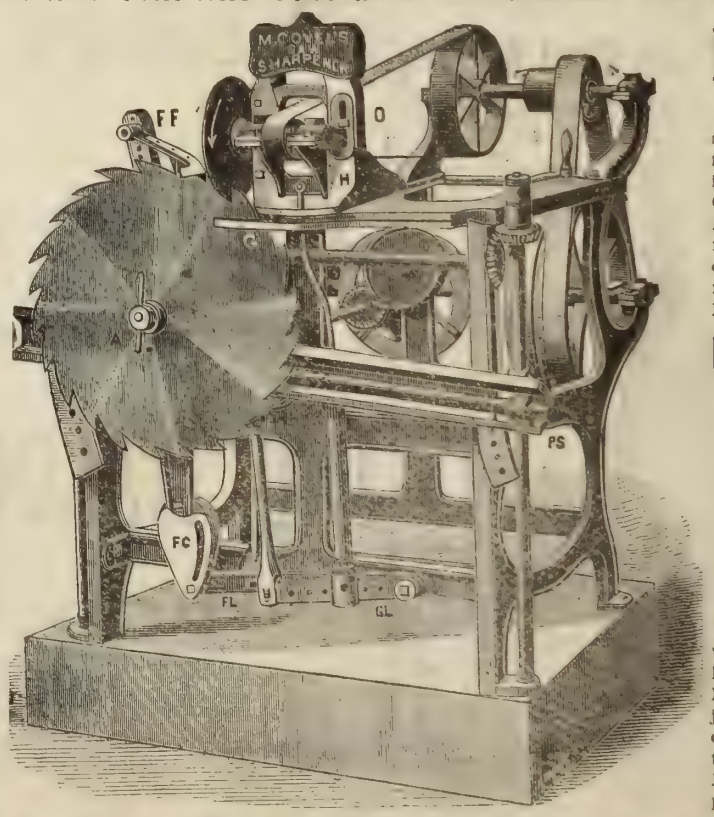
DEAR SIR—I have used your Steam Feed for near four months, and it has given me perfect satisfaction in every way; it is admitted by every person who has seen it work to be the best feed ever invented. Since I put it into my mill, I have not lost ten minutes time fixing anything belonging to it. I can cut 18 boards 13 ft. long in one minute. It can do much smoother and better work than the pinion feed. It is easily governed and reverses the carriages instantly. I am thoroughly satisfied with it and can recommend it to any person who has a Circular Saw Mill for cutting long or short logs. I consider I have cut more lumber than will pay for the Steam Feed since I got it than I would have cut had I not put it in.

Yours respectfully,
WILLIAM TAIT,
Lumberman, Gravenhurst.

TORONTO, August 11th, 1880.

WM. HAMILTON, Peterborough, Ont.

DEAR SIR—The Steam Feed you put in is working splendidly. Yours, &c.,
THOMPSON, SMITH & SON.



MILL MACHINERY!

I am also manufacturing Saw Mill Machinery, for all sizes of Gang or Circular Mills, Span or Double Circulars for Slabbing Small Logs. My Patent Jack Chain for drawing logs into Saw Mills, acknowledged by all to be the Cheapest and best ever got up; also, my Patent Lumber Markers, different sizes of Edgers, Gang Lath Mills, Trimmers, Power Gummers, and all Machinery used in a first class Gang or Circular Saw Mill; also, small Hand Gummers for use in the woods, for Cross-cut Saws. Rotary Pumps of different sizes, for Fire Protection in Mills, &c.

Horizontal Engines and Boilers

CORLISS ENGINES

Where economy of fuel is the great consideration, along with uniformity of speed, such as is required in Grist and Flouring Mills, Woollen and Cotton Factories, or large Factories of any kind, I supply the Corliss Engine. I feel justified in saying that our Style, Workmanship and Finish on this Engine will be no discredit to its renown, and certainly is not equalled in this country for economy of fuel. I have them working at 2½ pounds of coal per horse-power per hour.

L10

WILLIAM HAMILTON,

PETERBOROUGH, ONT.

PUBLISHED SEMI-MONTHLY.

The only Newspaper devoted to the Lumber and Timber Industries published in Canada.

SUBSCRIPTION $2.00 PER ANNUM.

VOL. 1. PETERBOROUGH, ONT., NOVEMBER 1, 1881. NO. 25.

CUTLER, GILBERT & PEARSON'S saw mill made last Saturday the largest cut on record in these parts for a single circular, 66,300 feet of inch boards in eleven hours.—*Superior News.*

THE Lake Superior *News* says J. S. Taylor & Sons got in another raft of logs, 175,000 feet, from Stewart river, on Monday morning. They hope to bring in another raft to-morrow or on Saturday, and they will still have left at Stewart river over a million and a quarter feet of logs.

FOURTEEN years ago a gentleman of Monroe, Michigan, placed two gateposts of white oak in front of his residence. When they were set he bored into the top of each with a 1½ inch auger, 6 inches deep, filled the hole with common salt, tightly plugged it, and coppered the posts. Having occasion recently to change the location of the posts, he found them as sound from top to bottom as the day they were planted.—*Northwestern Lumberman.*

THE editor of the Bay City, Mich., *Tribune* has been shown a piece of oak taken from the old gunboat *St. Lawrence*, sunk off the beach near Mortonwood, Ont., for the past sixty years. The oak is as black almost as ebony, but as sound as the day it was used in the construction of the boat. When the vessel was condemned she was sold to a gentleman named Drummond, who stripped her of her fastenings, iron, etc., and then let her go to the bottom.

THE Lake Superior *News* says Messrs. Peck & Maxim, the former from Michigan City, and the latter from Ludington, have purchased a mill site on the east side of Rice's Point, between the Blast Furnace and Cutler, Gilbert & Pearson's mill. The property comprises 575 feet of water front, and runs back 1,233 feet. The firm name is W. G. Peck & Co., and they propose to put up one of the finest mills in this section, a double circular, capacity 90,000 feet per day, a planing mill, and a shingle mill, all provided with the latest modern improvements. They will commence building as soon as possible, and will have it in operation by the opening of navigation in the spring.

A DEVASTATING tornado lately swept through a section of the Menominee, Mich., lumber district. The Peshtigo *Eagle* says it was a mile wide, and besides filling up the road from Quinesec to Felch mountain, it filled Pine creek full of trees for a mile so that the water ran over and around the banks. On the Pike river, in that town, its course was a mile wide, and wherever it passed the lumber lies flat. The extent of the damage is not yet fully known, but from present information it is thought to cover hundreds of acres of timber. Men have been sent up to ascertain the full extent of the damage. The fallen timber will all have to be put into the river the coming winter, otherwise it will be spoiled by the worms.

ENGLISH WOOD TRADE.

James Smith & Co.'s wood circular, dated Liverpool, 3rd of October, says :—Business during the month has been in many respects satisfactory, and, although there has been no great advance in prices, still they are generally firmer and in some cases are higher than at the opening of last month. The harvest has proved to be better than at one time anticipated, and trade prospects in this country are altogether more encouraging. From Quebec it is reported that mills have stopped, owing to the low state of the rivers ; the stocks are light and prices rising ; the demand from the United States is also very good. Freights are firm, with the probability of an advance. Yellow pine :—The arrivals during the month have been rather less than in the same month of the previous year, and the consumption has fallen off, no doubt owing to the great advance in the price of this article. The rivers in Canada being so low makes it impossible to add to the stocks, and it is reported that many mills have had to stop running, and that prices are advancing. A small parcel of waney board pine was offered at auction a few days ago, but was withdrawn unsold. By private a cargo of Bay of Islands square pine was sold at 19d. per foot. Red pine is in very little request, and the stock remains heavy. For ash there has been a better demand, but there is an ample stock ; this also applies to elm. Oak :—There is a large stock, and although the demand is fairly good, still the consumption is not equal to that of this time last year ; prime wood is enquired for. From January 26th to September 30th, 374 vessels had arrived.

Robert Coltart & Co.'s wood circular, dated Liverpool, October 4th, says :—The improved tendency noticed in our last circular has been maintained during the past month, and prices have remained very steady, while for some articles an advance has been obtained. The import has been very light as compared with the corresponding month of last year, but the consumption also shows some reduction during the same period ; present stocks, though ample, are not now so much in excess of the demand as they were for several months past. Of square pine the import has been light, and sales have been difficult to make at the advanced prices demanded by shippers ; the consumption has been on a fair scale, and the present stock is moderate. Waney board pine has arrived more freely, and gone well into consumption. For red pine the demand continues dull. Ash, of prime quality, is enquired for. Elm has been in fair demand during the month. The consumption of oak has been on a limited scale, and the stock is increasing.

For wagon scantling the demand is dull, and prices are unremunerative. The import of birch has been moderate, but still sufficient for the demand, which continues dull. The stock of N.B. and N.S. spruce deals is now much reduced, being 15,211 standards against 25,821 standards at the same time last year ; the consumption has been on a fair scale, and if the present moderate rate of import is continued, a more satisfactory bnsiness may be hoped for. The stock of Quebec pine deals consists of 10,248 standards, against 5,177 standards at the same time last year, and the demand continues dull ; prices are low, and do not realize the cost of import. In Quebec merchantable pipe and puncheon staves there are no sales to report.

PAPER MAKING IN NORWAY.

If pine trees might have preference among all the strange destinies of transformation to which they are born, one could easily fancy their choosing to be wrought into paper. It takes but five minutes to do this in one of the Honefos mills by that brace of confederate prestidigitateurs, steam and water. The roar, and fizz, and clink with which they do it sound weird enough in the heart of the fir forest, where the mill stands, and the change is swifter than the eye can well follow. The logs are sawed in lengths of fourteen inches, split into quarters, smoothed, piled into a huge iron wheel, revolving in water, grinds them into pulp, and tosses the pulp into troughs and pipes. Here it is sifted and strained ; then, carried up into a huge revolving hopper, it is ground still finer ; then poured out and rolled in layers on huge iron rollers covered with woollen cloth. Off these rollers it comes in solid sheets, is folded, and put into presses to drip and dry, like newspapers. Just five minutes from the time the logs go into the iron wheel at the upper end of the mill they come out at the lower end in thick sheets. These are shipped to England, to be there mixed with linen and made into thinner paper.

Seven thousand dollars a year the pine forest makes in this way for its owner ; but to do it wheels run and men work night and day all the year round, except from six o'clock to six o'clock on Sundays.

The overseer, who seemed an enthusiast, said that his one ambition in life was to have such a mill of his own. "But I shall not get one," he said, sadly, "I am paid but forty dollars a month, and it takes that to support my family. Norway is a hard country for a man to rise in. He must go to America for that."

The mill stands on the edge of, almost over, a grand waterfall, the spray of which fills the air and makes still stronger the aromatic odor of bruised pine. On every side stretch away forests of trees awaiting their turn to die into new life. The spot is full of wild and poetic significance. Allied to secrets, from first to last, is the tree that goes from the realms of the upper air, solitude of night and stars, birds, and the winds of morning, to become voiceless messenger, faithful hoarder, of the purpose, power, passion, worship of men. From papyrus to pine, a long lineage of honor. The Mohammedan is right when he reverently treasures the smallest fragment of paper, because it may have borne or bears the name of God.

Pickled Railroad Ties.

If as many railroads are built in this country in the next five years to come as have been built during the last half decade, it will be difficult to get timber for ties. Oak and cedar are the varieties of wood used, all other available kinds of timber lacking durability or firmness. The Lake Shore Company has purchased a tract of timber land near Wickliffe, paying about $120 an acre for it. It is the only timber land between Cleveland and Buffalo, and the supply will soon be exhausted. The N. Y., C. & S. L. road was obliged to use beech, maple, and other varieties of hard lumber. The majority of the ties used on the new line, however, are cedar from northern Michigan. Shortly, when the oak and cedar are exhausted, it will be necessary to use hardwood timber, put through a pickling process such as is used in preserving the wood blocks of pavements. The process is a patent belonging to a company of gentlemen, most of whom are Clevelanders. It is easy to see that they have a profitable invention. Ties made of beech and maple and other varieties of by no means durable wood, put through the pickling process, have been laid on the road at Defiance, and although they have been in place five years, they show no indications of decay. The pickling is done by placing the ties in a large boiler, costing from $15,000 to $20,000, and soaking them in a solution of creosote and other ingredients, which are known only to the inventors. In England blocks of stone are used as ties, but the concussion of such a solid foundation is hard on the rolling stock and rails of the road.

The Cedars of Lebanon.

The once famous and extensive cedar forest of Lebanon, according to a writer in the Vienna *Politische Correspondenz*, has dwindled down to the dimensions of a mere thicket, numbering about four hundred trees. To save it from complete destruction, and preserve it at least in its present extent, Rustem Pasha, the Governor-General of the Lebanon, has issued a special ordinance, containing a series of stringent regulations calculated to check, if not quite put a stop to, the vandalism and carelessness of most travellers. It is expressly forbidden to put up tents or other kinds of shelter in the district of the trees, or to light fires or cook any provisions in their vicinity. No one is allowed to break off a bough or even a twig from the trees. It is forbidden to bring any beasts of burden within the district. Should oxen, sheep, goats or other pasturage cattle be found within the prescribed limits, they will be irredeemably confiscated.—*Scientific American.*

LOSSES BY FOREST FIRES.

LOW WATER INJURES BUSINESS—THE WASTE OF MATERIAL IN MANUFACTURING SQUARE TIMBER.

Some very interesting information regarding the lumber trade has been secured. It is upwards of thirty years since the water in the Ottawa river was so low as it is at the present time. Along the banks of the river and its tributaries large quantities of saw logs are tied up, which may only be estimated by hundreds of thousands. The little village of mills at the Chaudiere is almost deserted. The mills have shut down, and disappointed mill owners are forced to cancel remunerative contracts, owing to the scarcity of logs. All the prominent lumbering establishments have been obliged to suspend work, their yards having been cleared of logs, and the idea of getting any further supply down the river this season has been abandoned. It was estimated, during the early part of the present month, that this season's cut for the Ottawa Valley district would reach 367,000,000 feet. The present state of the water will make a material change in this calulation, which will probably fall short at least thirty per cent. of the actual quantity of lumber sawn.

LOSS FROM FORESS FIRES.

The want of water is not the only obstacle which the Ottawa lumbermen have been obliged to encounter of late. The destructive forest fires which have been raging over their extensive timber limits during the past few weeks have laid waste some of the most valuable timber property in the Dominion. The question of the timber supply of the Dominion has frequently received the attention of Parliament, and notwithstanding the precautions which have been taken to enforce the laws for the prevention of forest fires it has been found impossible to lessen the quantity of valuable property which is yearly destroyed in this way. The lowest estimate of the average annual loss through forest fires places it at $5,000,000 in the Ottawa Valley alone. It was suggested by an expert, who was examined before a committee of the House of Commons, that the appointment of a staff of inspectors of forests would largely reduce the annual loss from this cause. That the country should derive the fullest benefit from the services of such a corps, he said, it would be necessary that these inspectors should be practical foresters, men of education and ample experience in the best training schools of Europe. It would be comparatively easy to secure the services of such a class, who, when once established in this country, could train their assistants. When it is considered that it takes a pine tree 150 years to attain maturity the magnitude of the yearly national loss from this cause is more apparent.

VALUE OF TIMBER LANDS.

An idea may be formed of the value of the timber limits from which the Ottawa district is supplied from the following account of sales which were effected in this city by public auction and properties offered for sale on the 21st inst.:—The Campbell limit of thirty-nine square miles, situated on the Trout Lake branch of the Petewawa river, was first effered *en bloc*. It was started at $15,000 and was knocked down at $29,500. A limit of fifty square miles on the Desmoine and Coulonge rivers, owned by Sir Francis Hincks, was next offered. This limit was withdrawn, the highest offer being $110 per square mile.

The Fraser and McDougall limits were then offered, berths 164 and 169 being knocked down at $99,000; berths 165 and 168, 100 miles square, and berth 166, 50 square miles, for $59,000 and $36,000 respectively; berth 167, 50 square miles, for $15,000. An offer of $496 per square mile was refused for the Brannen limit, 50 miles square, on the Kippewa river. Lake Nipissing limits, berths 23, 43, and 51, 108 square miles, were offered, but withdrawn, the highest bid being $75,000 for the lot, or $50,000 for berth 23.

THE FORWARDING TRADE.

While the Millowners will be serious losers as the result of this season's operations, their misfortunes will be shared by the forwarders who carry their lumber to market. Although the volume of this season's business had, up to within a few weeks since, been fully up to the average, the forwarding trade on the whole, has not proved remunerative. Encouraged by the high freights ruling last year from the Ottawa mills to the American ports, United States bargemen added nearly one hundred new boats to their fleet for this trade. A number of bargemen employed on the Erie Canal withdrew their boats from that route, expecting to find more profitable employmeet in the Ottawa lumber trade. Their expectations can hardly have been realized. Freights opened in the spring at $3.75 per thousand from Ottawa to New York and $3 to Albany. Two weeks later they dropped twenty-five cents per thousand, and about midsummer another decline of twenty-five cents took place. The low rates of coal freight to Montreal and other ports have also proved a serious loss to the boatmen, who last year found profitable employment in taking a cargo of coal on their return trip. There is still another and equally serious drawback against which they have been obliged to contend. The low state of the water in the rivers and canals will not admit of boats being loaded to anything over three feet draft. The small craft have been compelled to lay up for the season, and the larger boats, on account of the small loads they are able to carry, are only barely clearing running expenses. Local forwarders are looking for an advance in freights, yet there does not appear to be any reason at present why their anticipations should be realized. The barge stock was never so large as it has been the present season, in consequence of which the competition has been more active. Quebec freights remain about as they opened in the spring—$2 per thousand for dry and $2.10 for green lumber. Freights to Montreal range from $1.10 to $1.20 per thousand; to Whithall $2.25, and to Burlington $2 per thousand.

A NEW OUTLET.

The Commissioner of Crown Lands for the Province of Ontario some little time since called the attention of Canadian mill owners to the opening up of a new outlet for the product of their mills, by which they may escape the duty of $2 per thousand feet which meets them on shipments to the United States, and which, he says renders it almost, if not altogether impossible, for them to compete with lumber from Michigan. The outlet he refers to is the shipment of inch and inch and a quarter sawn lumber direct from the mills at Ottawa, viz., the North Shore Railway to Quebec, thence by vessel to Glasgow. The experiment was tried and proved fairly remunerative. Hitherto the produce of Canadian saw mills shipped to Europe has been in the form of deals only.

WASTE IN SQUARE PINE.

To the great loss annually sustained from the waste of valuable material in the manufacture of square and waney pine, the commissioner has given special attention. The suggestions he offers for its remedy are well worthy of its consideration. He estimates that one fourth of every tree cut into square or waney timber is lost to the wealth of the country. When the tree is cut down it is lined off for squaring, and the "round" outside the lines is beaten off on the four sides. From the portion of the tree thus thrown to waste the best class of clear lumber is obtained when taken in the round to a saw mill. There is also the upper portion of the tree, which is cast away when the tree is made into square timber, but which would be sawn into lumber (of lower grade) if the round log were taken to the mill.

The estimated loss to the Province of Ontario from waste in cutting square pine, from 1868 to 1877, both years inclusive, was placed at $3,577,500. The circulation is as follows:—Total quantity taken from public and private lands during the ten years, 119,259.420 cubic feet; waste, one-fourth of each tree, equal to one-third of the total mentioned, namely, 39,750,140 cubic feet, or say in round numbers 477,000,000 feet board measure, which may be valued one-half at $10 per thousand feet, and one-half at $5 per thousand, representing relatively the prime timber from the upper part of the tree, average value say $7.50 per thousand, which gives the total loss for ten years as mentioned above, or equal to an annual loss of $357.750.

The word character comes from a term which means to engrave upon or to cut in. In selecting pens it is advisable to see that the name of Esterbrook is stamped on them.

THE SUPERVISORSHIP OF CULLERS.

The *Montreal Gazette* says:—We print in another column a letter from Quebec on the subject of the supervisorship of cullers, the position having been rendered vacant by the death of Mr. Quinn, who for many years filled that office. It raises a question of very considerable importance, namely, whether an office like that of Supervisor of Cullers, which from the nature of the business is located in Quebec, is to be considered as an ordinary political appointment in the hands of the member representing the constituency and supporting the administration of the day. Our own opinion is that it does not come within this class. It is not like a clerkship in the Post Office or Custom House or Excise Department, which may fairly be said, under the system that prevails in this country, to be within the gift of the local representatives. It is an office which has to do with the trade of the whole Dominion. The Supervisor of Cullers at Quebec is the Supervisor of Cullers for Canada, and under these circumstances it would, we think, be most unfortunate if the position were considered to be the gift of the member for Quebec. As a matter of fact, the lumbermen of the Ottawa and the St. Maurice have infinitely more to do with the Cullers' office, and are infinitely more interested in the manner in which the Supervisor performs his duty, than are the people of Quebec themselves, excluding, of course, the timber merchants, who may be said to have an equal interest. Under these circumstances we cannot help thinking the Government would act most wisely if they considered the views of the trade rather than the views of a supporter, who happens to represent the city of Quebec, in making the appointment.

THE VANDAL IN THE FOREST.

KENTUCKY'S GREAT TREE—MEASURING FIFTY-SIX FEET AT THE BASE—SLAUGHTERED!

What vandal hands cut down that pine,
That forest monarch tree!
That battled for life five hundred years,
Away in Kentucky?

Some timber butcher sure it was,
Who in his sordid strife,
Counted only on what logs he'd make,
By taking that monarch's life.

A soulless crowd from Vanceburg too,
Assembled there to see
Him wield the axe, and not one cried,
O! woodman spare that tree.

But shouts of frantic joy they gave,
When bowed its cloud capped head,
And its giant trunk in thunder crashed
Upon an earthly bed.

Their children, if half civilized,
Will sure in after years,
Make pilgrimages to its stump,
And water it with tears.

And when, in the long lapse of time,
Its heart is in decay,
They'll make a flower bed of its core,
When those Goths have passed away.

J. L.,
A Lumberman.

Cote St. Antoine, Montreal, October, 1881.

Startling Waste.

One reason why the cabinet woods of the country are scarcer and dearer yearly is given in the editorial correspondence of the *Industrial World*. The gentleman has been spying out the land, and in the course of much interesting information says:—"The unaccountable waste of timber is startling, if not appalling. While economists, and all thoughtful men in the older states, are gravely discussing the problem of the coming timber famine, the good natured, easy going farmers of Henry county (and all Missouri) are splitting magnificent walnut, butternut, cherry and mulberry trees into common rails for the enclosure of $8, $12 and $20 lands, cutting them into logs for cabins, hovels, and pig troughs, and even into common cord-wood, to sell on the market in competition with cheap coals. Still worse, many a woodland farmer girdles scores of valuable trees (even the stumps of which will be gathered for the coming markets), burns them in the new clearings side by side with the baser woods, and wonders the while that he must pay enormous prices for solid walnut furniture from factories a thousand miles away." Where are all the timber buyers?

Wood-Preserving Process.

A new wood-preserving process has been invented in France by M. Jacques. He first impregnates the timber thoroughly with a simple solution of soap, mixed with an acid—preferably phenic acid. This causes the fermentation, in a few days, within the wood, of a fatty acid, which is insoluble in water, and impregnates the remotest fibres. The reaction of the acid on the soap does not take place until a portion of the water has evaporated. It is claimed that more perfect impregnation can be had this way than with creosote, and there is no danger of the washing out of the preservative from the exposed surfaces, as when sulphate of copper is used. The government commission on technical railroad operation in France is said to favor this process.

Wood Drying.

M. Rens, of Stettin, renders wood perfectly dry and insensible to humidity and atmospheric variations. The wood is subjected to the action of oxygen which has been heated and acted upon by an electric current. The apparatus consists of a retort for the production of oxygen by any of the known methods, and of a kier which can be heated, and in which the boards are placed to be dried. Vacuum is produced in the kier, oxygen introduced, and after heating several times an electric current is allowed to pass through.

ADAM BOYLE, of Battleford, has hit on a new way of raising potatoes. Being pressed for time in the spring, he dug holes in the sand and dropped in the cuttings, covering them lightly with earth. This was all the attention they received, and now he is taking up a heavy crop of large and fine looking potatoes. If the Indians ever learn this system of potato culture, made easy, remarks the *Herald*, it will enable them to give their hoes a rest during the hot days of summer.

LIVERPOOL STOCKS.

We take from the *Timber Trades Journal* the following Comparative Table showing Stock of Timber and Deals in Liverpool on Sept. 30th, 1880 and 1881, and also the Consumption for the month of September, 1880 and 1881:—

	Stock, Sept. 30th, 1880.	Stock, Sept. 30th 1881.	Consumption for the month of Sept. 1880.	Consumption for the month of Sept. 1881.
Quebec Square Pine	535,000 ft.	600,000 ft.	256,000 ft.	489,000 ft.
" Waney Board	364,000 "	131,000 "		
St. John Pine	10,000 "	27,000 "	13,000 "	2,000 "
Other Ports Pine	57,000 "	43,000 "	14,000 "	6,000 "
Pitch Pine, hewn	708,000 "	364,000 "	144,000 "	2[illegible] "
" sawn	467,000 "	137,000 "	103,000 "	28[illegible] "
" planks	82,000 "	18,000 "	11,000 "	2[illegible] "
Red Pine	52,000 "	25,000 "	1,000 "	[illegible] "
Dantzig, &c., Fir	69,000 "	222,000 "	43,000 "	[illegible] "
Sweden and Norway Fir	5,000 "	4,000 "	—	2,000 "
Oak, Canadian	482,000 "	306,000 "	146,000 "	29[illegible] "
" Planks	148,000 "	—	22,000 "	
" Baltic	72,000 "	39,000 "	4,000 "	[illegible] "
Elm	49,000 "	36,000 "	25,000 "	2[illegible] "
Ash	22,000 "	4,000 "	14,000 "	[illegible] "
Birch	149,000 "	186,000 "	47,000 "	[illegible] "
Greenheart	39,000 "	67,000 "	4,000 "	[illegible] "
East India Teak	27,000 "	20,000 "	10,000 "	[illegible] "
Quebec Pine Deals } " Spruce "	10,249 stds.	5,177 stds.	3,132 stds.	1,423 stds.
N. B. & N. S. Spruce Deals	16,211 "	24,821 "		
" Pine "	888 "	1,451 "	6,151 "	10,532 "
Baltic Deals	4,172 "	3,214 "	968 "	2,228 "
" Boards	283 "	707 "	51 "	87 "
" Flooring Boards	2,133 "	1,914 "	511 "	938 "

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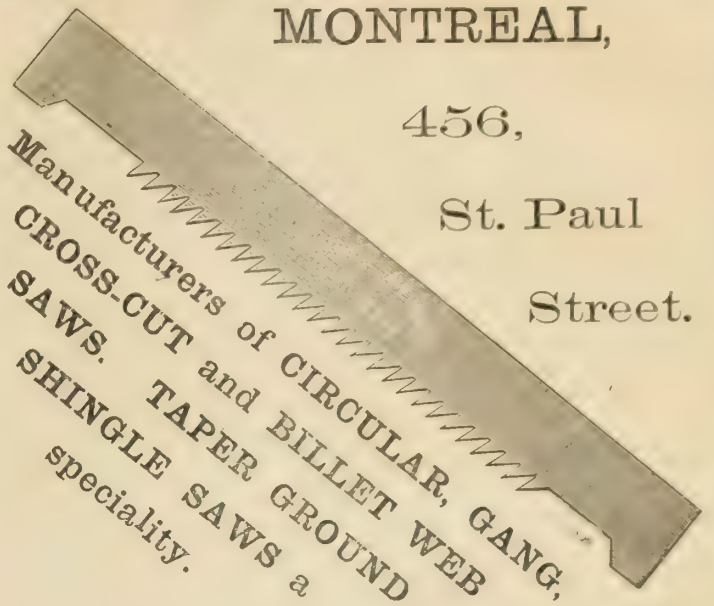

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According to the *Times*, 149 new buildings have been erected in St. Thomas this season at an outlay of $178,350. Last year the number of new structures was 108 and the expenditure $133,650. There are three huge contracts on the boards for next season—the Government buildings, the Grand Central hotel, and the new Presbyterian church.

A Woodslee manufacturer has contracted to make four million staves for a Buffalo man.

McBurney & McCall's large cabinet factory and planing mill at St. Williams has been enlarged to double its capacity to accommodate their increasing business.

The oak forest of Darnaway, which is the seat of the Earls of Moray, is acknowledged to be the finest in Scotland, and there are few which can compare with it anywhere in the British Isles.

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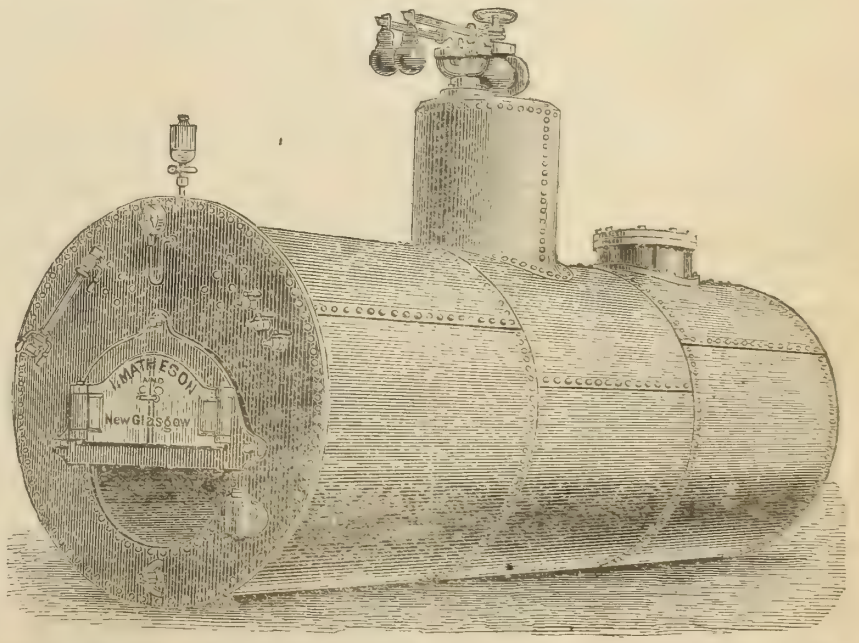

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L22-1y

FORESTRY.

The following is the able and interesting prize essay of Mr. P. E. Bucke, of Ottawa, which was read at the recent meeting of the Ontario Provincial Agricultural Association at London, Ont. :—

In the earlier days of the Province of Ontario (Upper Canada), if anyone had argued restriction on the destruction of timber, he would have had few to listen to him. Amongst the earlier settlers the destruction of trees was looked upon as one of the cardinal virtues. The superabundance of timber led to this state of things, and it is now found difficult to check the rapid wasting away of our forests.

Fifty years ago the trees standing in and around your "Forest City" were the admiration of strangers. Mr. J. C. Loudon, writing at the date referred to, states that "The white pine near New London has a trunk varying from thirteen to eighteen feet in circumference, and some trees which had been blown down were measured and found to average one hundred and sixty feet in length. The oaks varied from ten to fifteen feet round the trunk, with fifty feet of clear stem. Mixed with these were beeches, birches and ashes. Horizontal sections of white pine and hemlock spruce exhibited between 300 and 400 annual rings; oaks, 200; elms, 300." The memory of the writer reaches nearly back to the time and place referred to when, in the language of the American poet :—

"His echoing axe the settler swung,
Amidst the sealike solitude;
And crashing, thundering, down were flung,
The Titans of the wood."

When the pioneer looks back, what changes present themselves in the past fifty years. The goose which laid the golden egg is being rapidly strangled, and it is now declared by people best able to judge that the work of wholesale destruction of the forests of the country is being carried on without any new growth of timber being produced to take the place of that removed. The Government, which has for a long time lain in a partially dormant condition with regard to this subject, is now awakening from its lethargy, and it is trusted that this immense industry, second only to agriculture in this Province, will at length receive the attention its magnitude deserves.

The subject is a practical one, and must be approached in a practical way. Besides the use of trees for timber, it is now generally conceded that they have certain influences which assist in the harmonizing of the laws of nature. For instance, trees, by the absorption of carbonic acid gas, and emission of oxygen, assist in purifying the air we breathe. By interposing their foliage between the sun and the earth, they shelter the latter and equalize the temperature of earth and air. They cover the earth with leaves which, when decayed, make a most nutritious soil, and in the meantime guard against a too rapid evaporation of water. Trees also serve to protect both the ground and human habitations from cold and destructive winds. The evaporation from their leaves by cooling the atmosphere has the effect of increasing the frequency of showers, and also assists in the precipitation of dew. In will be seen in the manner above described that forests subserve a most beneficial purpose. Apart, however, from these considerations, and their utilitarian, or revenue producing qualities, trees are the most majestic and imposing of nature's vegetable kingdom, and no view, in any country, is an object of beauty without them. It is noticed in the report of the Commissioner on Agriculture, just issued, that the County of Kent is beginning to decorate its roadways by the planting of trees. Nothing can show a higher state of civilization, or a greater love of the beautiful, than tree growing for agricultural purposes. But besides harmonizing the influences of nature, and adding their graceful forms to the grandeur of the landscape, there is a wealth in trees which few can realize who have not had some share in the export timber trade of this country. In 1872 circulars were prepared and sent to all mill owners and others in Ontario to ascertain the amount of timber cut. When the returns were received, square timber, logs, deals, &c., were reduced to board measure, and the estimate based on these returns showed a production of 750,000,000 feet, and it was calculated that of this quantity from 85 to 87½ per cent. was exported, and the balance used in the country. The produce of the forests of Ontario since then are supposed to have declined.

The revenue derived from timber by the Crown Lands Department of this Province averages nearly $400,000 per annum, and the latest returns give an area of a little over 16,000 square miles of territory under license to parties for cutting timber.

The actual amount of timber in Ontario and the territory covered by it is a subject of the utmost importance, as the wealth of this Province, like most other new countries, is represented, not so much by its manufactures as by the product of the soil, and these are derived from three sources, namely, agriculture, mines, and forests.

The enormous waste of timber by bush fires is quite incredible to those who have not witnessed the devastation of pine lands by this destructive element. These originate through careless settlers, hunters who camp in the woods, and sometimes, though rarely, by the lumbermen themselves, or by surveyors who make smudges to ward off the attacks of flies and mosquitoes. These fires, started during a dry season, are only stopped by large streams, lakes, swamps, or by heavy and continuous rains, and are much more destructive than the shantyman's axe, because where the latter culls the good timber and leaves the small trees for future years, the former destroys both timber and soil, leaving a barren waste, the pines being usually replaced by a scrub growth of birch and poplar. Stringent laws have been passed by the Ontario Legislature against the originators of these fires, but unfortunately no sufficient machinery has been organized to put these laws in force, though petitions from time to time have been forwarded to the Local Government by the mill owners and lumbermen, who are in every way interested in their suppression. It is estimated that more timber has been destroyed by bush fires than has been exported altogether from this country.

It is evident that if these fires could be suppressed, and the young trees which are left on the pine lands after the large timber has been cut out, could be protected and allowed to grow up, a valuable basis would be formed for a continuous supply. If to this were added some systematic scheme by the Government for planting on its waste lands, it is not yet too late to recuperate the pine timber forests of the country. To further the proposed undertaking, it would be well to import a few practical foresters, in order that their accrued wisdom in the Old World might be utilized in the New. A portion of the revenue derived from the Crown Land's dues by the Government would be profitably expended in fostering and protecting the timber interests on the public domain, and if the present dues are not sufficient to meet the necessary demands, they should be increased. (Power for this purpose is given in the 1st section of an Act respecting Timber and Public Lands. Chap. 26, Con. Statutes of Canada, Section 1).

Under the direction of the Commissioner of Crown Lands, there is at present a system of wood rangers, which consists of a staff of twenty or thirty experienced and reliable rangers, engaged from December to the end of April, with some of the party continued to the end of October. The employment of these individuals has been very satisfactory, swelling the revenue in some instances 50 per cent., and in one agency 400 per cent. These rangers have standing instructions to report on any special waste, and amongst other things to see that any timber, which has been killed by fire running through it, is utilized before the borer has destroyed the wood. Although their visits through the bush have been of great service to the Government, it is obviously impossible for this small staff of partially employed men, and that at a time of year when fires of a serious nature never occur, to ascertain the orgin of the destructive conflagrations which visit the pineries, or to look as sharply after the interests of the Government as is necessary. The writer would therefore respectfully suggest that the Government should appoint permanently the required number of wood rangers, or inspectors, and that one or more constables be employed for every 100 square miles, whose duty it should be to appre-hend and report to the ranger, or other officer, any causes of violation of the Crown Timber regulations, and especially with regard to fires, the officer in charge being authorized to examine under oath, and prosecute parties offending against the Land Act. At present the regulations are good, but as there is no one specially, beside the rangers, to enforce them, and as these are so few and spread over so large a territory, besides which they are not employed continuously, the Government therefore can hardly expect that careful supervision which the country has a right to demand for the revenue obtained.

With regard to the replanting of trees as a means of continuing the timber supply, the Commissioner of Crown Lands, writing in 1877, says that "It is of course known that on the continent of Europe, where forests are in the hands of the Government (as they are in Ontario), the cutting down of trees is rigidly regulated and restricted, a system of yearly planting being closely adhered to. The same practice is followed in Britain, where forests are chiefly in the hands of private individuals, but in those countries the population is at a maximum, and is maintained at that point. No entrenchments on the forest lands are deemed necessary, whereas, in Ontario, a vast yearly influx is continually pressing into the lands of the Crown, before which the forests must in the meantime yield, whatever steps may be deemed necessary to restore them in the future." The writer must dissent somewhat from the theory laid down, and would suggest that millions of acres of pine lands are practically unsuited for agriculture, and therefore worthless for settlement, and it is the manifest duty of the Government, as holding the land in trust for the people, to see that these tracts are protected in such a way that the young timber is allowed to take the place of that cut, and that they be guarded against bush fires and promiscuous pillage. With regard to the preservation and culture of pine timber, it is absolutely necessary, owing to the large area required for its growth, and the time it occupies in attaining a suitable size for the purposes for which it is used,—say from 80 to 150 years, if produced from the cone,—that the Government must be the producer, cultivator, and protector. No individual could acquire the thousands of square miles which would be needed, nor could any family or company afford, as an investment, to await the period when the greater revenue from large timber would be derived. But the greatest obstacle to a private scheme of this kind would be the danger of throwing so large a monopoly of timber and territory into private hands. The Government, by the retention of certain districts, and the appointment of competent foresters and constables, could guard, plant and protect any sized domain, and it is believed would be enabled to secure a paying revenue from the timber grown. It is therefore suggested, 1st, that pine timber lands should not be subject to entry and premption or homestead laws; 2nd, that the lands now known as "Government Pine Timber Lands" should be surveyed and appraised at their approximate value; 3rd, that experts be directed to ascertain,—if it is not already known to the Government,—the pine lands area in Ontario.

With regard to the cost of producing timber, it is stated in the report on Swedish forest culture that in the northerly part of Sweden it requires two and three hundred years for trees to attain their full size, whilst in the southern part of the country one hundred years was found sufficient. Estimating, therefore, our pine lands at one dollar per acre, allowing 160 years for the timber to grow, and interest at the rate of 5 per cent., which would double the principle every 20 years, the result would be that at the end of the time specified (160 years), the timber would cost $256 per acre. The writer believes this statement to be a very accurate one. It does not take into consideration the further cost of fencing and taxes, and the wages for the further supervision of the estate, whilst on the other hand the thinnings from time to time would pay a small percentage, probably enough to clear all charges for interest, etc. The lakes and streams enclosed might also be protected, and together with the forests, could be made to yield a revenue from the fish and game produced in them.

In Sweden the pine and spruce lands are never entirely cleared. From six to seven seed trees are left on every quarter acre until the young plants begin to grow up. In five or six years these are removed.

With respect to the encouragement of tree planting, the neighboring republic has given great attention to the subject, and has endeavored to promote it by premiums, by reduction or remission of taxes, and on prairie lands the actual right to so many acres, without money payment, provided a certain number of trees are planted and cared for, and in various ways the state has tried to stimulate arboriculture, but the result has not been such as to warrant imitation on the part of Ontario. Practical papers on forestry, published in farming journals and such others as chiefly circulate amongst the rural districts, to popularize the movement, and plantations made of our various native and selected foreign forest trees, on such Government properties as the Experimental Farm, Guelph, the Asylum enclosures, public school yards, such exhibition grounds where fairs are held (where tree protectors could also be shown), would go far to represent in a practical way how the general appearance of our country could be improved, adorned and beautified, at little cost. Trees for this purpose should be correctly and neatly labelled, giving age, the date of transplanting, as well as the common and botanical name of the specimen, and its native habitat, if of foreign origin, etc. A few acres planted here and there would soon convince our farmers and others that there is money in the business, as well as beauty, besides an advanced price added to farm lands. With such facts before them, men would be found willing and ready to invest in this enterprise, and also to adorn their farms and home surroundings.

Mr. Hotchkiss, who compiled the lumber article for the last United States census, states that the timber supply in Michigan is not over twenty-nine billions of feet, and that the ordinary quantity annually cut diminished the supply at the rate of six billions of feet per annum, which will use up these forests in eight years. The State of Wisconsin, he estimates, has forty-nine billions of feet of standing pine and Minnesota six billions, one hundred and fifty millions, but the supply is fast diminishing. He also estimates that at the present rate of cutting the Canadian supply will give out about the same time as that of the United States, say thirty or forty years hence, at the utmost limit. The lumber trade of the continent will then be transferred to the Pacific slope. One of the largest saw mill owners on the Ottawa informs the writer that he does not think there will be any pine to cut for exportation from Canada twenty years hence. Should this Province, therefore, wish to retain her timber interests, there should be no delay in dealing with the question in some practica way.

It may be stated that there is a very strong feeling amongst the lumbermen and mill-owners on the Ottawa and elsewhere that the Government should survey and inspect all the pine timber lands, and ascertain as far as possible what is worthless for cultivation, and absolutely exclude settlers and squatters from these tracts. In making such an examination the character of the soil should be carefully and thoroughly made known, as the surface of the ground is usually covered with a thin coating of good soil, owing to the decaying of the leaves from previous years, which will only raise one, two, or at the most three crops, thereby exhausting this thin skim of earth, so that nothing further will grow upon it. In the meantime the burning of the rubbish off this worthless plot has endangered, if it has done nothing more, millions worth of property.

Again, it is a difficult matter for parties holding license claims over a large territory to dispossess squatters, as these people, who have nothing to lose, and who are possessed of the means of making a fire, could avenge themselves to an alarming extent. It is believed that if the Ontario Government could make the people aware of the value of the pine timber, and the necessity there is for protecting it, they (the Government) would be largely sustained in passing and carrying out the most stringent laws for the exclusion of parties liable to injure

their interests, or that of those who are making a living from the timber.

Having thus far dealt with our pine timber trade, which is of such vast importance to this Province, and the Dominion generally, owing to the large number of hands its production employs, the machinery and shipping utilized, and the enormous revenue derived from it, a little attention must be given to the hardwood trees, and those most suitable for forest planting. Perhaps it is as well to state that the area of the natural habitat of some of our most valuable native trees is very circumscribed. Experiments show that this may be greatly enlarged.

It may be said in a general way that no tree is unsuited for cultivation, but probably the largest returns may be derived in the fewest years by setting the Black Walnut (*juglans nigra*). This graceful and beautiful tree is an exceedingly rapid grower. Ten years from the sowing of the seed, on suitable soil, will give nuts in return, and at thirty years of age its wood may be sold for furniture purposes. Chief Johnston, of Brantford, states that he has trees of this variety in his grove for which he has been offered thirty dollars apiece. It will be found, by referring to the July number of the *Canada Horticulturist*, a very practical lesson is taught by the experience of Mr. Horace Everett, who, it is stated, twenty-three years ago planted twenty-three acres of land in the Western States with black walnuts. The trees are now from sixteen to eighteen inches through, and were sold for $27,000, this gives an income of $50 per acre for the use of the land, with a minimum of labor, by planting this timber.

In all tree planting on level ground it will be found advantageous to set every second row with soft wood trees, such as poplar, willow, basswood, black ash, etc., as these assist in keeping the ground clear of grass and weeds, and can be utilized in from five to ten years in a variety of ways. Their rate of growth being from three to four times greater than the hardwood trees, they present a special advantage for cultivation. The most profitable trees to grow will probably be determined by the locality where the planting is to take place; that is to say, when plantations are made of trees outside of the ordinary commercial timber, such as pine, oak, black and grey walnut, &c. Near large paper mills it would be most profitable to plant basswood, and such of the poplars as are used in that business. If near extensive carriage and tool handle works, hickory and white ash would be most suitable. Near gunpowder factories, the willow, used for charcoal. Furniture makers use maple, birch, black and grey walnut, and sweet chestnut; fish barrels, butter tinnets and hay-rakes are chiefly made from black ash, and in this way scarcely a tree of any kind can be grown that is worthless, and as the land becomes denuded of its forests, every tree will have its special value.

It is believed that if farmers worked less land better, soil feeding their stock, and raised more trees, they would find more money in their land. Some idea of the capacity of soil for tree growing, and the management of experienced foresters in Europe, may be formed from the statement that an acre of ash, elm or sycamore, 40 years old, will contain from 2,000 to 3,000 cubic feet of timber, and when 60 years old, double that amount, after successive thinnings, which, near a commercial market, become an important source of revenue, and often realize more than the cost of management and interest on the money invested. Larch, spruce, and other conifers, require less space than broad-leaved deciduous trees. Larch will do well in good soil with only nine feet between the trees.

The quantity of timber grown on a given area in some of the European government forests, managed in accordance with the rules of forestal science, is very much greater than the same soil would grow if the wood is left entirely to itself. So much is this the case that Dr. Berenger, head of the Italian school of Vallombrosa, states in the *Journal of Forestal Economy*, 1871-72, "That while an uncultivated woodland, taken for a long period, and counting interest and taxes, would yield almost nothing for the capital invested, it is well established that the same land, managed according to modern science, would in the long run yield a revenue both conspicuous and constant."

Whatever planting is done,—and it is recommended that the nut bearing trees should be the first experimented with, such as sweet chestnut, walnuts, black and grey, hickory and white oak,—the planting of nuts and very small trees should be made, so as to cover the ground promptly, say three feet apart, these may be thinned and pruned as circumstances dictate. It is calculated that, with very little labor for culture, rough, rocky lands, or ravines, by planting and securely fencing,—where there are no stock laws against cattle running at large,—may be made to pay a revenue in four years' time. The first cuttings could be utilized for hop-poles, hurdles, grape sticks, walking sticks, or sold for replanting on other waste lands, or along road sides, or permanent fences.

Another estimate gives the price for the preparation and planting of ten acres of land with black walnut and white ash as follows:—Planting, harrowing, ploughing, etc., would cost $5 per acre, $50; seed, 50c. per acre, $5; planting, $25; cultivating during first five years, if rows are eleven feet apart, and three feet eight inches between the trees, to be thinned to eleven feet apart when required, will be paid for by crops grown between them; for cultivation from fifth to ninth year, with horses only, $30 per annum, $120; after this time no cultivation will be required, making a total of $200 for ten acres. These trees, at 25 years of age, will average sixteen inches in diameter at the butt, and about ten inches at the height of sixteen feet. This would give, deducting waste in sawing, 120 feet of lumber per tree, allowing one-sixth for damage by the elements, and loss from other causes, there would be in round numbers 360,000 feet of lumber, which, at $50 per thousand, would give $18,000, whilst the tops for fuel would be equal to the cost of preparing the logs for the mill, and the expense of sawing would be $5 per thousand, so that, after deducting all outlay, the gross earnings would be $16,000 for the use of ten acres for 25 years, and the interest on the amount expended for planting and cultivation.

The European larch is probably one of the safest trees to plant as an investmeut, and would thrive well on the sandy lands of Dorchester, or the gravelly plains of Burford. This tree grows rapidly and closely, and in fifteen years becomes fifty feet high. It is equally at home on arid sands, rocky soils, ravines, or hill sides. It is valuable as an enduring tree, and for such purposes as railway ties, fence posts, etc., it has no eqnal.

In closing this paper, a reference to the planting of the larch by the Duke of Athol may not be out of place. These plantations were begun in 1728, and continued up to 1826, when more than 14,000,000 trees were planted, covering 10,000 acres. It was found that the larch gained its fullest value in 72 years, and before it reached this age the trees were thinned to 400 to the acre. Estimating the trees at 50 cubic feet, worth a shilling per foot, the product would be £1,000 per acre, from the poorest land for agricultural purposes that could possibly be found. Larch trees planted on this estate in 1743 were in 1795 nine feet three inches round at four feet from the ground, and one hundred feet high. In 1870 these trees measured more than sixteen feet round, and were 120 feet high.

From the foregoing observations the following conclusions may be arrived at:—Firstly, it is absolutely necessary that forest fires should be suppressed, and that it is the duty of the Government, who derive so large a revenue from timber lands, to expend any sum in reason that may be necessary in the direction indicated. Secondly, it is undesirable to open for settlement much of the land at present covered by pine forests, as it is of such a rocky, barren nature as to be quite unsuited for agriculture. Thirdly, that rocky lands, ravines and lowlying grounds may be profitably planted with little expense, if stock laws are enacted and enforced to keep cattle from destroying the young trees; fencing where wood is scarce and dear being almost a prohibition against the utilizing of waste lands. Fourthly, the area in which many of our valuable timber trees now grow may, by judicious planting, be much enlarged; and finally, if the present destruction of trees is not arrested, or new plantations made, there is much danger that our climate, rainfall, and the general health and prosperity of the country may be most seriously affected.

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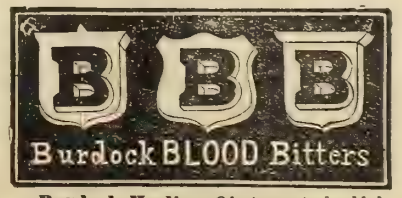

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MR. A. L. W. BEGG has been appointed agent for the CANADA LUMBERMAN, and is authorized to collect subscriptions and grant receipts therefor and to make contracts for advertisements appearing in its columns.

DEVOTED TO THE LUMBER AND TIMBER INTERESTS OF THE DOMINION.

PUBLISHED SEMI-MONTHLY BY

TOKER & Co. PETERBOROUGH.

Terms of Subscription:

One copy, one year, in advance	$2 00
One copy, six months, in advance	1 00

Advertising Rates:

Per line, for one year	$0 90
Per line, for six months	50
Per line, for three months	30
Per line, for first insertion	10
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Communications intended for insertion in the CANADA LUMBERMAN, must be accompanied by the name of the writer, not necessarily for publication, but as a guarantee of good faith. Communications to insure insertion (if accepted) in the following number, should be in the hands of the publishers a week before the date of the next issue.

PETERBOROUGH, Ont. NOV. 1, 1881.

TO SUBSCRIBERS IN ARREAR.

Those subscribers to the LUMBERMAN who have been in receipt of the paper since its first issue, and who have not, as yet, contributed to its financial support, either have, or will in the course of a few days, receive accounts for the amount of their past and coming year's sub scriptions.

We should imagine that it is scarcely necessary for us to remind "business men," like most of the subscribers to the LUMBERMAN, that, although taken separately, these accounts do not amount to very much, yet, when their number exceeds a thousand, the aggregate becomes a very considerable sum to the publishers; and that it is only by the prompt payment of these little accounts that the LUMBERMAN can be conducted with that vigor which we are sure its readers, as well as ourselves, desire.

In view of the early commencement of the second volume of the LUMBERMAN, it is of special importance that our subscribers should send in the amount of their subscriptions with promptitude, as upon their doing so must depend, to a very great extent, the improvements which we will feel justified in making during the ensuing year. In publishing a paper, as well a in most other things, "money" is the sinews of war, and sinews can only be supplied to the LUMBERMAN by each of its subscribers sending in promptly their subscriptions,—that is, if they desire it continued; if they do not, they should at least be equally prompt in sending us what is our due for the past, with a notice to discontinue.

THE wheat exports for India this season are said to have been larger than those of any recent year.

WE would direct the attention of our readers to the advertisement of Mr. Thomson Smith, the well known lumberman of Toronto, in another column, offering several valuable lumbering properties for sale.

STEPHEN C. HALL intends putting about 25,000,000 feet of logs into Houghton Lake this season. He will run from eight to ten camps and has now two in operation, and will open up others as soon as practicable.

ONE company on the Menominee River, Mich., owns 500,000,000 feet of pine, estimated to be worth $1,000,000. The same firm has $45,000 invested in teams and general outfit, and employs from 300 to 500 men.

THE St. John, N. B., *Sun* says the preparations for lumbering are not so extensive as last year, for, although the prospects for good prices are fair, the higher prices for provisions will affect production in some degree.

MAHOGANY for trimming parlour frames is being used to some extent by eastern manufacturers, who are putting out some fine goods in this style, and the movement meets with considerable popular favor and patronage.

A CORRESPONDENT at Packenham informs us that a large number of men have gone to the Ottawa, and that in all probability the make of square timber this season will exceed that of last year by about twenty-five per cent.

THE Scottish Arboricultural Society are this year to have their autumnal excursion to the woods of Tyninghame, Binning Wood, and Biel. Lord Haddington has invited the members to luncheon on the occasion of their visit.

THE *Timber Trades Journal* says that recent importations to the Clyde seem to have added considerably to the stocks at the ports in that river. Of Quebec deals there is now a stock of nearly 6,000 standards, being an increase of over 1,000 standards over the stock when the account was made up at June 30th. Of Quebec spruce deals there is now a stock amonnting to upwards of 1,000 standards in the hands of importers and consumers.

THE *Timber Trades Journal* says the carrying trade will now and for the rest of the season be chiefly done by steamers, as no sailing vessels will go out now with any expectation of getting back again before the winter sets in. Foreign ships not unfrequently charter out there to load and lay up, discharging crews and battening down hatches until the ice breaks up in the spring, but this kind of business is limited to cargoes of hewn timber, which do not take any harm while the frost prevails, and when the thaw sets in the vessel soon gets out of port and completes the voyage.

THE manufacture of thread from wood for crochet and sewing purposes has, it is said, recently been commenced in the middle of Sweden. It is wound in balls by machinery, either by hand or steam, which with the labelling, takes one minute and twelve seconds, and the balls are packed up in cardboard boxes, generally ten in a box. Plenty of orders from all parts of Sweden have come in, but as the works are not in proper order there has hardly been time to complete them all. The production gives fair promise of success, and it is expected to be very important for home consumption.

Kindling Wood.

In New York there are 41 different establishments devoted to the kindling wood trade alone. The largest of these concerns is C. W. Alcott & Co., who have a capital of $300,000 invested in their business, and employ in the busy season from 600 to 700 hands. They cut and prepare most of their wood in the forests of Virginia, employing in that department a force of from 500 to 600 men. Last year they handled 25,000 cords of wood. They are interested in seven vessels, and charter others in order to keep up with the demand. Two steam engines of 60 horse power each, drive the machinery that is used for sawing and splitting.

LINDSAY LUMBER SHIPMENTS.

A correspondent of the *Globe* says the shipments of sawn lumber from Lindsay to Port Hope by the Midland this season include 12,000,000 running measure from the mill of Mr. M. Boyd, Bobcaygeon; 12,000,000 feet cut by Mr. R. C. Smith, Fenelon Falls; and the shipments of Messrs. Green & Ellis. of Fenelon Falls, when completed will be between three and four million feet. The increase in the lumber shipments by the Midland are estimated at fully one-third more than those of last season, and in square timber about the same. Owing to low water, moreover, on some of the tributary waters to the back lakes, a quantity of lumber that would otherwise have sought this outlet has gone *via* the Georgian Bay. Large quantities of telegraph poles for the new opposition line are also being made. Agents have been through this section buying up all the telegraph poles obtainable, to supply the demand. In shingles the output is also far in excess of late years, and large consignments have been made by J. P. Davis and W. Bick, Bobcaygeon, and John Thurston, Lindsay. The sawn lumber sent over the Midland to Port Hope goes to Albany and Oswego. The Western Ontario market is largely supplied from the lumber forwarded from the Georgian Bay and its tributaries by way of this point. It is brought down the Midland as far as Lindsay, where it is transferred to the Whitby, Port Perry and Lindsay Railway, and thence west by the Grand Trunk. The amount of freight business by this outlet also shows a very large increase during the season, the quantity forwarded averaging ten car loads a day. The principal drawback is that the Midland Railway finds it difficult to obtain cars enough to supply the demand. The leading firms engaged in forwarding lumber and lumber stuffs by this route are the Georgian Bay Lumber Company, who ship from Waubaushene; the British Canadian Lumber and Timber Company, from Midland; R. Power, from Victoria Harbour; Peter Christie, from Victoria Bay, and A. Tait, from Orillia. A large amount in the aggregate is sent from the smaller mills at way stations. The prospects for next season are extremely encouraging, and it is likely the present year's exceptionally large output will be exceeded. Hardly a day has elapssd since the commencement of work in the bush in the latter part of August to the present time without a carload of lumbermen passing north over the Victoria railway to the shanties. Preparations are being made on all hands for an unusually heavy winter's work.

The Destroyer of the Spruce Trees.

Maine's lumbermen—and, therefore, a large part of the rest of her citizens—are much disturbed by the destructive insects which are killing the spruce trees not only in that State, but in the adjacent British Provinces. The pine has lost its pre-eminence, and the spruce was getting in a position to be the representative tree, but the *Urocerus albicornus*, if the thing has been properly identified, the Augusta *Journal* says, is killing off the spruce faster than the lumbermen could have done it, and greatly to their detriment. The white-horned *Urocerus*, for that is what his name means, is about an inch long and with wings which spread to two inches. They are as likely to destroy the pines into which they bore as the spruces, so far as the etomologists know. These insects are very prolific, and not at all uncommon. In England it has often been noticed and recorded, but there it was injurious only to ornamental trees, not to those on which so much depends in a business way, and in whose preservation so many people are interested, as the spruce forests of the Northeast. The prospect seems to be that things will go from bad to worse. Unless some smaller insect comes to the front and destroys the eggs of the *Urocerus*, it is hard to see what is going to save our spruce trees.—*Scientific American.*

THE Mississippi River Convention held sittings yesterday at St. Louis and passed a number of resolutions in favor of Congress appropriating large sums for the improvement of the great natural highway.

IMPROVING THE OTTAWA.

A proposition having been submitted to the Minister of Public Works for damming the Ottawa on the upper waters with the purpose of securing a more uniform level at all seasons of the year, we have enquired concerning the feasibility of the project and learn from a lumberman acquainted with the river some interesting facts. The proposed site of the dam is below Lake Temiscamingue. This lake is 70 miles long from its head to the head of the Long Sault Rapids at its foot. These rapids are six miles long and about a quarter of a mile wide at the head, and about 250 wide at the foot in low water. The banks here are flat and sandy on the south side and pretty much the same on the north bank. It would, therefore, be difficult to construct a dam at this place and make it substantial. The mountain rapids, seventeen miles below the Long Sault, are about 300 feet wide. The banks on both sides are good and high, and the water is not deep. This would be an advantageous place to construct a dam with back water to drown out the Long Sault. The Arables rapids, situated three miles below Mountain rapids, are from 300 to 400 yards long, the average width being 125 yards, with good banks at the head. A properly constructed dam at the Mountain Rapids would make the river navigable to the head of Lake Temiscamingue, and a good land road can be found from there to Mattawa railway station, say ten miles. The land at the head of the lake is good for farming and well adapted for settlement. It is said that the Minister of Public Works intends to send two engineers to examine these points and report on the project of the dam. Certainly the experience of the past season would indicate the necessity of an improvement of the kind proposed, and we shall await further investigations with interest.—*Ottawa Free Press.*

American Furniture Woods in London.

Probably but few even know the locality of Dod street, Limehouse, much less imagine the amount of business that is carried on within the few quiet looking buildings which compose its thoroughfare. We were recently invited to inspect the London depot of Mr. Hermann's extensive timber business, and must express our entire satisfaction at the splendid stock of goods held by this firm. Mr. Hermann has long been known as a manufacturer of furniture upon American principles, and in the recent exhibi tion at Islington he exhibited some first class suites in solid ash and black walnut. A vast array of these specimens is to be found at the works in Dod street, and the quantity of stored up timber, to which we would particularly refer is alone worth a visit to see. It is unnecessary to estimate the exact number of feet stowed away in the two buildings, the factory and timber yard; suffice it to say that on every floor and in every corner, piles of oak, walnut, ash, &c., both in the log and in plank, lie ready for use, besides a variety of manufactured goods, such as table and chair legs, which are imported in this state on account of the saving in freight which is thereby affected.

Mr. Hermann also carries on the business of a timber dealer, and is in a position to supply American woods at very low prices, the main reason for his ability to do so being the fact that he imports his own woods direct from the lumber mills. The Dod street depot, we are informed, is insignificant compared to the large factories and saw mills of the firm at New York San Francisco, Philadelphia, Indianapolis, and other places. Business generally at these works seemed brisk, and it does not appear that the talked of scarcity of black walnut is likely to have any immediate effect here, as there is a good stock on hand for present use and plenty more available on the other side of the Atlantic. —*Timber Trades Journal.*

"Don't Know Half Their Value."

They cured me of Ague, Bilousness and Kidney Complaint, as recommended. I had half a bottle left which I used for my two little girls, who the doctors and neighbors said could not be cured. I would have lost both of them one night if I had not given them Hop Bitters. They did them so much good I continued their use until they were cured. That is why I say you do not know half the value of Hop Bitters, and do not recommend them high enough.—B., Rochester, N. Y.—*American Rural Home.*

OSWEGO, N.Y.

Three uppers	$42 00@45 00
Pickings	32 00@35 00
Fine, common	20 00@25 00
Common	14 00@18 00
Culls	13 00@15 00
Mill run lots	17 00@22 00
Sidings, selected, 1 inch	34 00@38 00
1¼ inch	34 00@38 00
Mill run, 1x10, 13 to 16 feet	18 00@22 00
selected	23 00@28 00
shippers	16 00@17 00
Strips, 1 and 1¼ inch mill run	15 00@22 00
Culls, selected	23 00@32 00
Culls	13 00@15 00
1x6 selected for clapboards	25 00@40 00
Shingles, XXX, 18 inch, pine	3 75@ 4 00
XX, " "	3 00@ 3 25
XXX, 18 inch, cedar	3 00@ 3 25
XX, " "	2 25@ 2 40
Lath	1 40@ 1 60

Matches.

In the United States and Canada there are 22 match factories, turning out 25,000 gross—3,600,000 boxes—of matches every day. The average is about 100 matches to the box, and the daily consumption is therefore 360,000,000 matches, a yearly average of 131,580,000,000 matches.

A Wise Deacon.

"Deacon Wildes, I want you to tell me how you kept yourself and family well the past season, when all the rest of us have been sick so much, and have had the doctors visiting us so often." Bro. Taylor, the answer is very easy, I used Hop Bitters in time; kept my family well and saved the doctor bills. Three dollars worth of it kept us well and able to work all the time. I'll warrant it has cost you and the neighbors one to two hundred dollars apiece to keep sick the same time." "Deacon, I'll use your medicine hereafter.

WANTED

A SITUATION IN A LUMBER FIRM, as Superintendent of Shanties and Drives; has had twenty years' experience. Good references can be given. Address R. M. S., 307, Rideau Street, Ottawa. 2L24

MILL MACHINERY FOR SALE.

A TURBINE WATER WHEEL, 50 inches, Steam Cylinder, 12 inches, with Steam Chest, Shafting and other Saw Mill gearing. Address P. O. Box 352, Barrie, Ont. 4L24

CANADIAN PACIFIC RAILWAY.

Emory's Bar to Port Moody.

NOTICE TO CONTRACTORS.

Tender for Work in British Columbia.

SEALED TENDERS will be received by the undersigned up to NOON on WEDNESDAY, the 1st day of FEBRUARY next, in a lump sum, for the construction of that portion of the road between Port Moody and the West-end of Contract 60, near Emory's Bar, a distance of about 85 miles.

Specifications, conditions of contract and forms of tender may be obtained on application at the Canadian Pacific Railway Office, in New Westminister, and at the Chief Engineer's Office at Ottawa, after 1st January next, at which time plans and profiles will be open for inspection at the latter office.

This timely notice is given with a view to giving Contractors an opportunity of visiting and examining the grounds during the fine season and before the winter sets in.

Mr. Marcus Smith, who is in charge at the office at New Westminister, is instructed to give Contractors all the information in his power.

No tender will be entertained unless on one of the printed forms, addressed to F. Braun, Esq., Sec. Dept. of Railways and Canals, and marked "Tender for C. P. R."

F. BRAUN,
Secretary.

Dept. of Railways and Canals,
Ottawa, Oct. 24th, 1881.
12d102 7L25

Timber Limits & Sawmill FOR SALE.

The subscriber being anxious to concentrate and consolidate his business, on account of his age, will sell at very low prices—

1st. His Mills and Farm near the Bradford Station, Northern and North-Western Railway, together with Limits in Ridout and Sherbourne.

2nd. The Portage and Canal connecting Black River with Lake St. John, and Lake St. John with Lake Couchiching, in the Township of Rama.

3rd. Eight million feet of saw-logs now in Black River.

4th. About 4,000 acres of land in different townships.

If not sold at private sale, the above will be offered to the highest bidder at some future time to be named, as I intend to close all out and concentrate in Michigan, where I now have mills.

All and any information can be had from Thompson Smith & Son, Toronto, or James Durham at Bradford Mills.

4L25 THOMPSON SMITH.

P. PAYETT'S NEW IMPROVED

Adjustable Saw Guide!

Can be adjusted without danger. You can take your saw off without taking the guide off the frame.

All kinds of Brass & Iron Casting

PLAINING and TURNING done with Despatch. For particulars address:

CRAIG & CAMERON,
PENETANGUISHENE. L25tf

ROBERT SMALLWOOD

MANUFACTURER OF

The Patent Lever Feed Shingle, Box Board & Heading Machine

(Always takes First Prize.)

Rotary Saw Mills

IN FOUR SIZES, and other

MACHINERY for SAW and GRIST MILLS.

SEND FOR CIRCULAR.

CHARLOTTETWON,
L24-1y Prince Edward Island

Department of Crown Lands,

TORONTO, 6TH OCTOBER, 1881.

NOTICE IS HEREBY GIVEN THAT, UNDER AN ORDER IN COUNCIL,

TIMBER BERTHS

In the undermentioned Townships in the

MUSKOKA and PARRY SOUND DISTRICTS,

Will be offered for Sale by Public Auction at the Department of Crown Lands at twelve o'clock noon,

On TUESDAY, the 6th day of December next,

viz.:—Townships of Mowat, Blair, McConkey, Hardy, Patterson, Mills, Sinclair, Bethune, Proudfoot, Gurd, Machar, Strong, Joly, Laurier, Pringle, Lount, Nipissing and Himsworth.

The area to be disposed of in the above Townships as Timber Berths is upwards of 1,400 square miles, and to suit all classes of purchasers each Township will, as nearly as practicable, be divided into four berths.

Sheets containing conditions and terms of Sale, with information as to Area and Lots and Concessions comprised in each Berth, will be furnished on application personally or by letter, to the woods and forests branch of the Department, or to the Crown Timber Offices at Ottawa, Belleville and Quebec, and the Office of T. E. Johnston, Esq., Parry Sound.

T. B. PARDEE,
4L24 COMMISSIONER

HOP BITTERS.

(A Medicine, not a Drink,)

CONTAINS

HOPS, BUCHU, MANDRAKE, DANDELION.

AND THE PUREST AND BEST MEDICAL QUALITIES OF ALL OTHER BITTERS.

THEY CURE

All Diseases of the Stomach, Bowels, Blood, Liver, Kidneys, and Urinary Organs, Nervousness, Sleeplessness and especially Female Complaints.

$1,000 IN GOLD.

Will be paid for a case they will not cure or help, or for anything impure or injurious found in them.

Ask your druggist for Hop Bitters and try them before you sleep. **Take no Other.**

D. I. C. is an absolute and irresistible cure for Drunkeness, use of opium, tobacco and narcotics.

SEND FOR CIRCULAR.

All above sold by druggists.
Hop Bitters Mfg. Co., Rochester, N. Y., & Toronto, Ont.

Drake Brothers' Box Mill,

Provost Street Extension, New Glasgow, Pictou County, N. S.

SPUCE, PINE AND HEMLOCK SHINGLES

F. H. DRAKE. L22-1y N. H. DRAKE.

D. McLACHLAN & SONS,

Manufacturers of all Descriptions of

STEAM BOILERS.

SHIPS' WATER-TANKS. Repairing Punctually Attended to.

1y-L20 NORTH SLIP, ST. JOHN, NEW BRUNSWICK.

WILLIAM CAMPBELL

(Late CAMPBELL & FOWLER.)

MANUFACTURER OF

Edge Tools, Axles, Springs,

&C., OF EVERY DESCRIPTION.

L24-1y

Robertson Place, Smythe Street - ST. JOHN, N.B.

MILL SUPPLIES.

Extra Stretched and Patent Smooth Surface

RUBBER BELTING—in Stock, 2, 3, 4, 5, and 6 Plies.
HOYT'S CELEBRATED LEATHER BELTING.
COTTON BELTING, for Flour Mills. &c., Superior Quality.

DISSTON'S CELEBRATED MILL SAWS.

Steam Packing of all kinds, Rubber and Linen Hose, Silk Bolting Cloth, Emery Wheels, Lacing Leather (Page's Genuine), Lard, Seal, Cylinder, Spindle, West Virginia and Wool Oils. Our Stock includes Mill Supplies and Rubber Goods of all kinds. Quotations furnished for any part of Canada. 21

ESTEY, ALLWOOD & CO., SAINT JOHN, NEW BRUNSWICK.

PARKER & EVANS

SOLE PROPRIETORS OF THE

FAMOUS INTERNATIONAL

BOILER FLUID COMPOUND.

Patented 5th March, 1877.

This Compound will save its Cost many times in one year by saving fuel.

It eradicates scale, and when the Boiler is once Clean a very small quantity keeps it Clean and Free from all Incrustation.

It is perfectly harmless to Iron, and emits a clear pure Steam.

In ordering, mention the CANADA LUMBERMAN. L24ly

504 St. Paul Street, MONTREAL.

ESTABLISHED 1820.

EAGLE FOUNDRY!

GEORGE BRUSH

14 to 34 King and Queen Streets, MONTREAL,

MAKER OF

Steam Engines, Steam Boilers, Hoisting Engines, Steam Pumps,

CIRCULAR SAW MILLS, BARK MILLS, SHINGLE MILLS,

Ore Crushers, Mill Gearing, Shafting, Hangers and Pullies, Hand and Power Hoists for Warehouses, &c., &c.,

AND AGENT FOR L25-1y

"Water's" Perfect Steam Engine Governor, and "Herald & Sisco's" Centrifugal Pumps

REGULATIONS OF THE WATERS OF THE OTTAWA.

The following communication appears in the Ottawa *Herald* :—

Improvements must keep pace with the advance of civilization and the requirements of the times. The extensive commerce and trade of the 19th century, impelled by the most ambitious and insatiable enterprise, is not content with supplying actual wants, but ingeniously creates new branches of trade which in turn call for accommodation, and thus the ball keeps rolling, changing everything into gold, or the Almighty Dollar. There was a time, before the discovery of the use of steam, when the world's business was transacted with satisfactory despatch, though there were no steamboats or locomotives going in a few days against wind and weather across the continent. But the days when "pampered jades" and mules could do the carrying trade of the world are long since past, and the people of this exceedingly "go ahead" age would die of actual stagnation were they deprived of their railroads and canals.

Not a great many years ago the Grand River in its natural state, without the smallest improvement, accommodated all the trade of the Ottawa Valley, but then the trade of this section of the country was comparatively nothing. Bytown then covered a few acres of ground, and no person ever dreamed that the capital of a great Dominion would be built on the banks of the Grand River, or that to-day we would behold the Government Buildings towering over the brow of Parliament Hill. But civilization spread out its wings, and the lumberman's axe went further up the river each succeeding year, and great slaughter was accomplished among the "kings of the forest." The Chaudiere with the Big Kettle, in early years the terror of the lumber merchant, afforded admirable milling advantages, and accordingly as soon as its merits were recognized capitalists obtained water privileges, and erected mills which went up in quick succession. These mills increased the demand for timber and gave an additional impetus to the great staple trade of the Ottawa. But the trade could not assume such vast proportions and be carried on lucratively without improvements along the river affording greater facilities to the lumberman. Therefore, slides, booms and other necessary improvements were undertaken and completed, and up to within a few years back timber was floated from the Upper Ottawa to Quebec without much difficulty. But now that timber is being taken from near the head waters of the Ottawa, and from afar in on the tributaries, it is found very difficult to get timber to Quebec in the same year it is cut ; and much extra expense has annually to be incurred by individual firms in making temporary improvements to facilitate the getting out of timber ; and when it is a task of much difficulty at this comparatively early day to take timber to Quebec the same year it is cut, what will be the condition of things some years hence, when the forests along the banks of the Ottawa are completely exhausted, and timber is being taken out forty, fifty or more miles back on the tributaries? Without some improvements of the Ottawa River, it would be utterly impossible to get timber to market in less than two years, and hence it becomes vitally necessary to the existence of the umber trade that a plan to regulate the waters of the Ottawa should be decided upon and put into execution at as early a day as possible. We shall throw out a few ideas bearing upon the matter, and if the scheme, which we shall briefly state, be considered worthy of consideration, then the approbation of the lumbering fraternity, whose interests and welfare we are ever solicitous to promote, will be our greatest reward.

It is an acknowledged fact, we presume, that year after year the immense volume of water of the Ottawa appears to flow down into the St. Lawrence in gradually decreasing space of time, the result being that great inconvenience is caused to all kinds of trade, and incalculable pecuniary loss incurred. In the spring of the year the great volume of the water sweeps down, doing much immediate damage, while it leaves the tributaries and streams far up almost dry. Then, since the spring freshet destroys much property, and produces great inconvenience in the getting out of timber, while it is of no imaginable benefit, should not the first consideration in attempting to regulate the waters of the Ottawa be to adopt some means of keeping back as much of the spring freshet as possible? This could be accomplished by damming, and dams would be of very little use without an immense reservoir to hold the water. Rapids or falls would render this system almost impracticable so far as utility is concerned, and therefore an immense level is essentially necessary, and if we are correctly informed, Lake Temiscamingue is the grandest reservoir on the continent of America. Gentlemen who have paddled their canoes over its immense level expanse and beheld the high timber-topped hills on every side will corroborate the above assertion. The lake is about 80 miles in length, stretching from the strait or gut at the head of the Long Sault, and becoming wider and wider, until what may be called the lake proper is reached, which is over eight miles in width and 30 in length. From the Long Sault to the head of the Lake is one level expanse of water unbroken and undisturbed by rapid or fall.

We would propose building a dam about 30 feet high at the Long Sault. The banks on either side are lofty and afford admirable facilities for the construction of a dam which would not be over 2,000 feet in length, and would keep back an enormous volume of water, which at present goes to waste every spring, leaving timber high and dry in the streams, and mills deficient of water power before the season is three-quarters over. Of course the dam would be fitted with sluice gates, by which the flow of water could be regulated. During the early part of the spring the water is always high enough for navigation, water power or any other purpose, but in the summer and fall the universal cry from Grenville to the head of the river is for more water. Thus it is that we advocate the keeping of water back for a "dry day. Lumbermen have had a system in vogue for a number of years of damming the streams running through their limits, until the water became low and driving difficult, when breaking down the dams, a splendid torrent comes dashing along, floating their timber out into the river. The damming of Lake Temiscamingue is identically the same as this, on a larger scale, and with infinitely greater results. No danger or damage can eminate from it, and not an inch of country will suffer inundation, high rocky banks rising on every side.

We consider this a subject of vast importance to Ottawa and the Ottawa Valley, and one which cannot be ignored. Some such improvement as that which we have briefly referred to must be made ere long, and the sooner the better. We will say no more at present, but will probably refer to the subject again if our suggestions prove worthy of being entertained.

PENETANGUISHENE.

A correspondent of the *Mail* says :—Last week I had occasion to visit Penetanguishene, and there saw C. Beck & Co.'s new mill in operation, and this, for its size and capacity, is, in my mind, the best mill in that section of the country, and I am inclined to think in the Dominion, though that may be saying too much.

This mill consists of one gang and one circular, and the latter is deserving of special mention for the quickness of its movement, and its capability of cutting more lumber in a given time than any circular I have yet seen or heard of.

It does the slabbing for the gang, and cuts as much as ordinary circulars besides ; and it is quite capable of slabbing for two gangs, together with what it at present cuts. Its regular work is from twelve to thirteen boards per minute, and if crowded could drop fifteen to sixteen per minute, which gives one some idea of its rapid movements, both saws turning out from sixty to seventy thousand feet of timber in a working day of eleven hours.

As is well known, Mr. Beck's old mill was destroyed by fire, he having suffered a heavy loss, but with his undaunted energy and go-aheaditiveness he has succeeded in raising up a mill on the ashes of his old one that is both a credit to himself and the village. And this, with three other mills, ranks Penetanguishene as one of the lumbering centres of the Province, and is deserving of mention as such.

SHANTY SERVICES.

A Bracebridge correspondent of the *Christian Guardian* appeals to the Toronto Conference to establish missions in the Muskoka lumbering district. He says :—

"Previous to the last May meeting of the Bracebridge district, one of its members accompanied a lumber merchant, who is thoroughly familiar with the Muskoka region, in an imaginary tour over that section of the country comprehended in the the Bracebridge district,.and discovered that, allowing twenty men for each camp, there would be close on three thousand men within that section, engaged in lumbering, who, for more than half their time very rarely, if ever, hear the word of God preached, and this by no fault of theirs. In the camps little or no reading is to be found. Here is a good field for the Tract Society's operations. The little time that is left between supper and bed, which is the only time for recreation, is passed in singing songs of a doubtful, or decidedly profane character, playing cards, smoking—in any way but that which tends to profiting. When these men visit for a day or two the adjacent villages they act like sailors come ashore, and even worse, spending their money in strong drink, engaging in fights, and making an offensive babel about the ears of peaceful inhabitants. Of course there are many happy exceptions to this among the lumbermen, but the majority fall into this evil way. Mr. Wesley's merciful rule was *to go first to those who need us most.* If we are willing to act on this we will, without further unnecessary delay, put forth some direct effort to reach and bless the poor "shanty-men." As a class they are free and generous, open-hearted and open-handed. The "boss" of a shanty has in ninety-nine cases out of a hundred a hearty welcome for any man who calls to conduct a religious service for the benefit of the camp ; and invariably the rough, good-natured men themselves show marks of respect for the messenger of the truth."

A Trip Up the Lievre.

A correspondent of the Ottawa *Citizen*, describing a trip up the Lievre, says :—The object of our trip up the Lievre was to define the boundaries of about 234 square miles of timber land, and to ascertain the quantity of timber these square miles would give and the quality of the wood. I must at once assure you that this is a country unparalleled for lakes, mountains, rivers, hills and creeks, and all to be driven and surmounted, and the timber close to the lakes, rivers and creeks, and the pine and spruce trees, sound and free from punk, gum seams, knots, etc. Of course you will find a small percentage faulty. The whole front of the River du Lievre, starting from the Piskatoshing, a tributary of the Gatineau, down to the Rouge for a distance of 50 miles in the rear, is licensed to the heirs of the late J. F. Gaudet, and I can safely say that from the explorer's own personal inspection and report is worthy of attention, and only from sterling lumbermen, who only make a practice of working limits, and not from hearsay, giving a country unknown to themselves (a barren brule), but from practical experience of its real worth.

The whole of this country for 50 miles back of the Forks is well timbered, and about 600,000 pine and spruce logs can be made without much expense.

The Mississippi "Boom."

KEOKUK, Ia., Oct. 18.—The Mississippi continues to rise. At 10 a. m. the water was two inches above the great rise last spring, which caused immense damage in this vicinity. At Alexandria, five miles below, the water is backing up over the prairie. The prospects are that the town will be inundated. Railroad shops and lumber yards in the southern part of the city are completely surrounded and operations suspended. It is feared that the river will rise at least another foot and very disastrous floods result.

Are You Going to Travel?

Don't forget a supply of that Dr. Fowler's Extract of Wild Strawberry. It is a superior remedy for sea sickness, and a positive cure for all bowel complaints induced by bad water, change of diet, or of climate. Whether at home or abroad, it should be kept at hand in case of emergency.

Prof. Macoun in the North-West.

WINNIPEG, Oct. 8.—Professor Macoun and party returned last night from their exploratory tour of Lakes Manitoba and Winnepegoosis, and their tributary streams, together with the section of the North-West around the Porcupine Hills and Duck Mountains. In the latter direction there were found fine streams. The Swan and Red Deer Rivers were carefully explored. The result was satisfactory, and salt was found at many points on the land around Lake Winnepegoosis. A member of the party reports fine spruce and poplar timber on the mountains, as well as on the banks of the Swan and Red Deer Rivers. Poplar as well as spruce trees have been seen that measured about fifteen inches in circumference, and the former has been found to have an altitude in some places of seventy-five feet. Game is abundant, particularly duck, and they look upon it as a paradise for sportsmen. They spent some time at the Pelly Indian Reserve farm, where fine crops were raised this year. The land in this vicinity is pronounced the finest in the North-West. The crops of all kinds, cereals and root, are not excelled in any part of the country. The land is described as undulating prairie, with exceedingly fertile soil, easy of drainage into the Assiniboine and its tributary, the Still River.

Wood for Fuel.

The United States Bureau has been gathering some facts upon the consumption of wood for fuel. After taking the figures in the last report for the coal output, the superintendent says :—"Even with the large increase in the coal production during the last half century wood still keeps in the van as fuel, the consumption in this country being in favor of wood against coal in the proportion of four to one. In Maine, New Hampshire, and Vermont wood is almost the only fuel. In many counties of Massachusetts coal is ahead of wood, while in the state generally, as Connecticut, the percentage is about equal. Thickly populated cities, like New York and Hudson and Essex counties New Jersey, containing the cities of Jersey City and Newark, are put down entirely as coal. In Pennsylvania, the great coal state, there are many entirely coal counties, while in others, as Crawford, in the western part of the state, not over three per cent of coal is used. The same difference holds good in different parts of New York."

Spontaneous Forests.

A writer in a West Virginia paper combats the opinion, held by many arboriculturists, that an open county is never converted into a forest, through the operation of natural causes, and as establishing the fact that such change does sometimes occur, brings forward the case of the Shenandoah Valley. When first settled, about 160 years ago, it was an open prairie-like region covered with long grass, on which fed herds of deer, buffalo, elk, etc., and having no timber, except on rigy portions of it ; but in consequence of its settlement, the annual fires were prevented, and trees sprang up almost as thickly and regularly as if seed had been planted. These forests, having been preserved by the farmers, cover now a large part of the surface with hard wood trees of superior excellence. These facts would also seem to substantiate the theory that the treeless character of the prairies of the West is due to the annual burning of the grass by the Indians.

THE Ogemaw *Herald* says the firm of Cutting & Daman, who have a mill in Foster township, six miles from Beaver Lake, are cutting from 25,000 to 30,000 shingles, and from 8,000 to 10,000 feet of siding per day. They contemplate putting in an upright saw to cut lumber, and will put in 1,500,000 feet of hemlock logs, for this purpose, the coming winter. They will employ 50 men, and put in, besides the hemlock, 1,500,000 feet of pine to be worked up in shingles and siding. Their mill will be in operation the year around.

Nature Makes no Mistakes.

Nature's own remedy for bowel complaints, cholera morbus, cholic, cramps, vomiting, sea sickness, cholera infantum, diarrhœa, dysentry, and all diseases of a like nature belonging to the summer season, is Dr. Fowler's Extract of Wild Strawberry, which can be obtained of all dealers in Medicine.

Chips.

MISSISSIPPI River lumbermen, while in Eau Claire, Wis., recently, for the purpose of contracting for logs, offered from $6.50 to $7.00 a thousand for them.

AT a recent date the stock of American lumber at Melbourne was quite low, especially of ceiling, shelving, and clear pine, the latter being lower than for many years past.

THE use of sawdust in mortar is recommended as superior to hair for the prevention of cracking and subseqent peeling off a rough casting under the action of storms and frost.

THE assorting crews at the Dells dam, Eau Claire, are at work again and turning out a constant stream of logs, which go into the Beef slough works. The amount rafted at the works to date will reach 355,000,000 feet.

THE Chicago & Western Indiana railway is expending $500,000 in building lumber docks at South Chicago, and the demand, it is said, far exceeds the proposed supply, which represents 19,000 feet of dock frontage.

THE grounds of the C. N. Nelson Lumber Co.'s mill at Cloquet are so conveniently arranged with elevated platforms, &c., that the entire product of the mills, over 200,000 feet per day, is handled with two horses, on lumber buggies.

MR. FORSEMAN, of Williamsport, Pa., has lately closed a trade with a syndicate of Stillwater lumbermen, for a tract of land containing from sixty to seventy million feet stumpage, on Moose River, at five dollars per thousand, boom scale.

A GERMAN paper says that if Americans are to supply Europe with tanned leather they must be more sparing of the hemlock in their forests. The rapid consumption of American timber is attracting much attention among European economists.

THE Lake Superior *News* says the lumbermen are busy fitting out their camps for the winter campaign on the logs. One firm alone is expecting to put in 25,000,000 feet of logs, another firm 16,000,000, and so on. The cut this winter will be about double that of last season.

THE Stillwater *Lumberman* says :—The season having arrived for men to go to the woods, we call the attention of our citizens to the need of saving their newspapers for them. Over 1,700 were forwarded from the Y. M. C. A. rooms last winter, and a greater number can be sent this seasou if people will assist to the extent of leaving their papers there.

LUMBERMEN occasionally "ketch on" to a good thing. Henry Smith, a Greenville lumberman, recently secured the refusal of a tract of pine between Stanton and Lakeview for one week, the price agreed upon being $17,000. Before the week was up he was offered $5,000 for his bargain, but refused it. He has since contracted the logs on the tract, to be delivered in Six Lakes, at the head of Flat River, for $10 per thousand.

THE new pulp mill at Marinette, Wis., is described as a whole saw mill in itself, having a large five-foot bolter, endless chain and log carriage, and will be able to saw up logs three feet thick and twenty feet long. Machines for taking the bark off and splitting the wood will be near the bolter, and the wood will be carried by machinery directly to the grinders in the other end of the mill. The paper company has crews in the woods now getting out logs, and numerous logs are already in the boom.

AT a recent meeting of the Natural History Society of Goslar, a paper was read by Herr Chief Forester Reuss on the effects of the smoke from the smeltings in that neighborhood (which are very extensive, giving employment to 17,000 men) on the adjacent forests in the Upper Harz. The sulphurous fumes, which are discharged in enormous volumes, are the noxious element. Herr Reuss finds that conifers suffer more than other trees, and the silver fir most of all. The oak resists the evil influence best. The plane and ash also resist well. The beech, on the contrary, is very sensitive. The more vigorous the specimen in each species the greater their powers of endurance.

LUMBER SHIPMENTS.

The following are the shipments from St. John, N.B., from the first of the year to the 30th of September, and their destination :—

	Deals and battens.	Boards and scant'g.	Palings.	Pine	Birch
Penarth	13,557,945	519,296	8,150	..	..
Cardiff	2,795,661	..	..	..	..
Bristol	1,285,460	191,980	..	..	..
Newport	4,229,609	85,658	..	..	..
Swansea	1,135,430	1,678	..	..	..
Sharpness	1,419,133	381,605	..	..	..
Bridgewater	331,898	..	..	..	..
Neath	230,660	..	..	..	..
Continent	16,944,998	171,113	5,000	..	..
Glasgow	6,974,710	294,160	..	..	..
Queenstown	1,232,549	37,674	400	..	..
Liverpool	52,145,314	2,467,797	207,195	743	2,938
London	7,998,546	450,205	..	..	..
Belfast	5,578,064	..	..	..	..
Dundalk	1,584,694	..	..	62	6
Limerick	2,420,091	..	..	..	..
Londonderry	3,952,918	..	..	..	..
Fleetwood	436,508	..	..	..	..
Waterford	866,682	..	..	..	4
Sligo	405,793	..	..	..	..
Wexford	337,882	..	..	..	9
Newry	1,721,570	1,167	..	..	..
Drogheda	767,119	..	..	..	..
Clonakilty	319,604	..	..	..	650
Carnarvon	336,891	279	..	..	..
Cork Quay	6,217,902	52,455	..	..	..
Ballyshannon	118,195	2,089	..	..	..
Portrush	847,201	..	..	..	..
Dublin	7,641,282	20,488	..	..	..
Westport	633,294	..	..	..	..
Bantry	426,662	..	..	..	..
Galway	546,795	..	..	..	..
Australia	1,205,804	82,607	55,620	..	..
Africa	1,009,331	114,324	..	..	..
Mumbles, f. o.	702,513	11,977	..	..	..
Warrenpoint	1,078,647	..	8,000	..	..
Ayr	415,115	..	..	..	..
Kenmare	312,511	..	..	..	..
Clifden	226,035	..	..	..	..
Dungarvan	422,659	..	..	..	..
Faversham	689,983	1,088	..	..	..
Wicklow	341,540	..	..	..	..
Plymouth	440,546	..	..	..	..
Clare Castle	315,624	..	..	..	..
Hare Island	567,739	..	..	..	..
Youghal	305,934	..	..	..	..
Barrow	1,002,127	11,544	..	..	..
Totals	154,485,369	4,899,184	234,965	806	3,609

DAMAGE BY BUSH FIRES.

TORONTO, Oct. 10.—On the 29th ult., Mr. Smith, Superintendent of colonization roads for Ontario Government, was sent out in response to numerous and urgent requests from the township authorities to inspect the colonization roads and see what damage had resulted to them from the recent bush fires with a view of repairing them. Mr. Smith, who returned on Saturday, says that he went through the greater part of the Haliburton district in the county of Peterborough. On the Kinmount and Bobcaygeon roads he found that considerable damage had been done ; also on the Victoria, Miners' Bay, Monk, and Burleigh roads. Cameron, Snowdon, Monmouth, Minden, and Haliburton roads were not injured to any extent. The settlers have suffered very much from the destruction of their fences. Before leaving he had arranged for such repairs to the colonization roads as were absolutely necessary, but none others.

MUSKOKA DISTRICT.

The Superintendent also visited the Muskoka district just previous to this. Here he found that Macauley road and Macauley road south were much damaged. One settler had suffered a loss of $1,500, but no other instance, he believed, presented a case of utter destitution. The burnt districts in Muskoka were almost entirely confined to Macaulay township. In Muskoka also great damage to fences had resulted. The fires, however, were, he thought, confined for the most part to sparselysettled districts.

"MUST SAY it's the nicest thing I ever used for the teeth and breath," says everyone having tried "Teaberry," the new toilet gem. Get a 5 cent sample.

ARE YOU ?—Are you a Dyspeptic? Have you Indigestion? Is your Liver sluggish? Does your food trouble you? Does sleep fail to refresh you? Is your appetite and energy gone? Zopesa (from Brazil) will cure you, tone you up, and invigorate your whole system. It is a gentle purgative, acts as a wonder upon, and gives strength and energy to the Digestive apparatus. It is strongly anti-bilious, carries off all surplus bile, tones the Liver, gives sound Digestion and speedy health to the Dyspeptic and the Billious. Try a 10 cent sample at least.

THE fall price lists of furniture manufacturers of Chicago, Grand Rapids, Cincinnati, and generally throughout Michigan and the northwest, show an advance of from 10 to 20 per cent. The rise applies particularly to chairs, but extents to all kinds of staple goods.

SEE TO IT?—Zopesa, (from Brazil) will cure the worst case of Dyspepsia. A single dose will relieve in a degree that shows its wonderful curative powers, and its peculiar action upon the Stomach and Digestive Organs. It is a positive and absolute cure for Costiveness and Constipation, acting in a remarkable way upon the system, carrying off impurities. As a Liver regulator its actions are most remarkable. It tones and stimulates the Liver to action, it corrects the acids and regulates the bowels. A few doses will surprise you. Sample bottle 10 cts.

July.

During this month summer complaints commence their ravages. To be forewarned is to be forearmed. Dr. Fowler's Extract of Wild Strawberry is the best preventative and cure for all forms of bowel complaints and sickness incident to the summer season.

D. S. BRIGGS,
9 TORONTO STREET, TORONTO.
WHOLESALE DEALER IN
Clear, Pickings, Common and Hardwood Lumber, Lath, Shingles, &c.
BILL STUFF CUT TO ORDER.
L12-1y

J. K. POST & CO.
LUMBER MERCHANTS
And Shipping Agents.
OSWEGO, N. Y.
L12-1y

JAMES HADDEN,
MANUFACTURER OF
Shingles and Dressed Stuff.
Foxmead, P. O., County of Simcoe, Ont.
Two Planers for sale or exchange for a Boiler. b26

S. S. MUTTON & Co.,
Wholesale Lumber Dealers
TORONTO.
We have for Sale a large quantity of PINE, OAK, WHITEWOOD, ASH, CHESTNUT, CHERRY, BUTTERNUT, BASSWOOD, &c.
☞P.S.—A SET OF TUB MACHINERY FOR SALE, CHEAP—OR EXCHANGE FOR LUMBER. 1yL16

A. L. UNDERWOOD
WHOLESALE DEALER IN
White Pine, Basswood & Hardwood,
82 King Street East,
TORONTO, ONT.
1yL16

FOR SALE.
The Dexter & Whitwam Manufacturing Company, offer for Sale the Entire
Real Estate Plant and Machinery
OF THEIR EXTENSIVE
BENDING & TURNING FACTORY
Situated in the City of St. Thomas, in the County of Elgin, Ontario. For full particulars apply to H. BROWN, Manager, or E. MOORE, President. L20tf

J. T. LAMBERT,
Lumber and Commission Agent.
FOR SALE.

150	Mlls.	White Pine,	1 x 10 Stock.
175	"	do	1 x 12 "
11	"	do	2 x 10 "
20	"	do	2 x 12 "
140	"	do	1 inch Siding.
20	"	do	1½ "
40	"	do	2 x 10 Joists.
16	"	Cedar,	3 x 6 "
19	"	Basswood,	1¼ inch.

APPLY AT THE OFFICE, L20
WELLINGTON STREET, OTTAWA.

Flexible Board Rules,
With Steel Head, either Cleveland or London make, at $1.75 Each.
GEORGE STETHEM,
PETERBOROUGH, L16

J. G. EDWARDS
HARDWARE MERCHANT,
LINDSAY.
BELTING, FILES, BABBIT METAL,
1y CHAINS, ROPE, and L17
LUMBERING SUPPLIES.

WANTED.
Cherry, White Ash, Black Ash, and Dry White Pine Lumber.
Quote Price delivered, and Carefully Describe :—Quality, Widths, Length, Thickness, and how long Sawed.
ROBERT C. LOWRY,
Wholesale Lumber,
12L19 55 Pine Street, New York.

SAMUEL WINDRIM,
MANUFACTURER OF
Agricultural Implements, Etc
MILLBROOK, ONTARIO.
HAVING DISPENSED WITH THE SERVICES OF AGENTS, I take this opportunity to bring to the notice of intending purchasers of Reaping Machines, that I have now on hand a quantity of the Celebrated
HANLAN REAPER,
which has NEVER BEEN BEATEN YET, and am prepared to allow the Agents commission—FIFTEEN PER CENT—on all purchases. L17tf

WISDOM & FISH
IMPORTERS AND DEALERS IN
Rubber and Leather Belting
RUBBER HOSE, STEAM PACKING,
LUBRICATING OILS, COTTON WASTE
Wrought Iron Pipe and Fittings,
And all Articles used in the Application of Steam to Machinery.
No. 41 Dock Street, St. John, N. B.
(SMALL'S BLOCK.)
N.B.—Estimates for Steam and Hot Water Heating Apparatus furnished on application. All work Warranted. 1y-L20

LEATHER BELTING.
Chipman, Renaud & Co.
MANUFACTURERS OF
LEATHER BELTING,
FIRE ENGINE HOSE
LACE LEATHER, &c.
124 & 126 Queen St. L25-1y
MONTREAL

Market Reports.

MONTREAL.

From Our Own Correspondent.

OCTOBER 24th.—Since the date of our last report the lumber trade has been quiet, but as the water at Ottawa has risen very considerably there have been more importations, and stocks are now pretty full, which has helped to prevent an advance in prices. In another fortnight the season for receiving lumber by water will be over for this year, when some change in quotations is looked for. There has been very little demand for building lumber of late, as builders are beginning to close operations for the time being, and what is required for the winter for completing buildings has been contracted for some time ago. Only three cargoes of lumber have been shipped since the 10th inst., viz., to London, 590,000 ft., and to Buenos Ayres, 794,714 ft. Two vessels are now loading for South American ports. The total shipments to the River Platte since the opening of navigation up to date were 9,182,337 ft., against 7,359,174 ft., being an increase of 1,923,163 ft. For building lumber, ex yard, we continue to quote :—

Pine, 1st quality, ₱ M	$32 00@40 00
Pine, 2nd " ₱ M	18 00@24 00
Pine, shipping culls, ₱ M	12 00@15 00
Pine, cull deals, ₱ M	8 00@10 00
Pine, mill culls, ₱ M	5 00@ 6 50
Spruce, ₱ M	8 00@10 00
Hemlock, ₱ M	8 00@10 00
Ash, run of long culls out, ₱ M	16 00@18 00
Bass, " ₱ M	14 00@16 00
Oak, ₱ M	35 00@45 00
Birch, ₱ M	17 00@20 00
Hard Maple, ₱ M	18 00@25 00
Lath, ₱ M	1 25@ 1 35
Shingles, 1st, ₱ M	3 00@ 0 00
Shingles, 2nd, ₱ M	2 00@ 0 00

CORDWOOD.—As the season advances the demand for cordwood increases, while stocks are by no means heavy, and an advance on present quotations is spoken about, and will likely take place as soon as navigation closes. We quote prices on the wharf, ex cartage :—Long maple, $7.00 ; short do., $6.50 ; long birch, $6.50 ; short do., $6.00 ; long beech, $6.00 ; short do., $5.50 ; tamarac, $4.50.

TORONTO.

From Our Own Correspondent.

OCTOBER 24th.—Our docks now show conclusive signs that lumber shipments for the season of 1881 are rapidly drawing to a close, and there is but little lumber left on the dock at the present time, so that vessels have now to wait for cargoes, instead of the lumber having to wait for the vessels ; and the fact that several American buyers are now over here looking for cargoes, and anxious for all they can procure before the close of navigation, tends to prove that there is at least no overstock of lumber at the eastern lumber marts. There is an excellent demand for stock boards for shipment, and at rates in advance of that obtainable two weeks ago, and there is no doubt that the eastern market holds less sound dressing stocks on hand at this date than at any corresponding date for the last three years ; this, coupled with the fact that stocks for shipment on this side are nearly exhausted, would seem to warrant the present, if not a further, advance in prices. Lath in this market are scarcer than at any period during this season, and will doubtless advance in price, as frost, if severe, practically prevents the manufacture of lath to any great extent, and there will be a great many yet required in this market, as well as other places, in order to finish up this season's building operations. Shingles are in fair demand, but quite sufficient are being manufactured to meet that demand, and in this connection I notice that manufacturers are not so particular as formerly in properly assorting their shingles, quite a quantity of No. 2 being mixed with the XXX, this will tell against them in the future, and manufacturers will ultimately find it to their interest to see to it, that their brands are just as represented. Their laxity in this respect is no doubt attributable to the scarcity existing during a part of the past season, so that purchasers did not stop to examine so closely as formerly as to quality. The local market is now fairly supplied with most kinds of lumber, and nearly all the yards during the past two weeks have increased their stocks considerably, more especially in boards bill stuff being still scarce, and dry joisting a thing of the past. Good, dry 2 in. ash is exceedingly scarce, and good prices may be obtained for choice lots. The sales of mill cull scantling and boards in this market during the season has been large, and in consequence ot the shipments to the American markets having been brisk, culls have been plentiful, and so much speculative building having been going on, has absorbed it all quite readily, the main object of such builders being to run up houses as cheaply as possible, and get them off their hands at the earliest opportunity.

QUOTATIONS, CAR LOADS.

Mill cull boards and scantling	$ 7 00
Shipping cull boards, promiscuous widths	9 00
" stocks	11 00
Scantling and joist, up to 16 ft	10 00
" " " 18 ft	10 50
" " " 20 ft	11 00
" " " 22 ft	11 50
" " " 24 ft	12 00
" " " 26 ft	12 50
Scantling and joist, up to 28 ft	13 50
" " " 30 ft	15 00
" " " 32 ft	17 00
" " " 34 ft	18 00
" " " 36 ft	20 00
" " " 38 ft	22 00
" " " 40 to 44 ft	27 00
Cutting up planks to dry	16 00
" boards "	14 00
Sound dressing stocks	14 00@16 00
Picks Am. inspection	24 00@26 00
Three uppers, Am. inspection	32 00@34 00

B. M.

1½-inch flooring, dressed	28 00
1½ " " rough	14 00
1¼ " " dressed	24 00
1¼ " " undressed	12 50
1 " " dressed	20 00
1 " " undressed	13 00
⅝ Beaded Sheeting, dressed	20 00
Clapboarding, dressed	12 50
XXX sawn shingles, ₱ M	2 80
XX sawn shingles	2 50@2 80
awn Lath	1 35@1 60

OTTAWA.

From Our Own Correspondent.

OCTOBER 12.—It is estimated that the cut of lumber this season at the mills of the Chaudiere, Hull, and New Edinburgh will not be equal to that of last year by between forty and fifty million feet, so that the surplus stock, above what was contracted for in the spring by outsiders, will be extremely limited, taking it all in all and none of the mills in this locality have been running much more than half time during the season now drawing to a close, owing to the to the lack of logs. There were plenty taken out last winter, but the rapid falling of the rivers, and unusually low water this fall, prevented them being brought down to their destination. Several large lots of logs were stuck in the tributaries of the Ottawa before being got into the main stream. Thousands of those that were got out are now stuck on the rocks in the rapids at the Chats, the Deschesnes and the Remenix. It is thought that there are between three and four hundred thousand logs stuck at the Chats Rapids alone. The channel in the Remenix has been improved by blasting, and logs are being got through slowly. The Gatineau drive is still stuck above Chelsea, but the contractor has blasted the channel and will get the logs started as soon as the water begins to come up.

THE WATER IN THE OTTAWA

has risen a few inches during the past week, but not enough to benefit the river drive. The mills will only be able to run until about the middle of November at the best, so that if the logs do not come down soon there will be a decided cleaning out of the lumber yards of this neighbourhood during the coming winter. As a general thing quite a large quantity is yearly held over from the fall until the spring, when prices generally rule better. Very few sales of lumber have been made of late, shipping contracts being merely filled. Prices are decidedly firm, with a strong tendency to further advance. The following are present

QUOTATIONS :—

Shipping Culls, per M	$00 00@11 00
Stocks	16 00@23 00
Sidings	25 00@35 00
Mill Culls	7 00@ 8 00
Lath	1 00@ 1 10

LUMBER FREIGHTS.

Shipments are steady, although barges are unable to take out little more than half a load, owing to the low water, which is somewhat unprecedented ; but to make it pay three barges start from this point and when St. Anne's is reached the load of one is transferred to the other two, which go on to their destination while the empty one is sent back again. Barges which carry 200,000 feet at a load have only been able to take 115,000 feet at the most. There was recently a slight advance in freight rates, caused by American boatmen striking. The rates paid at present are as follows :—

To New York, (with 25c. extra for strips)	$ 3 75
To Albany	3 50
To Whitehall	2 50
To Burlington	2 25
To Quebec	2 00
To Montreal	1 20@1 30

FOR THE SHANTIES.

A great many men are being sent up to the shanties this fall, and it is estimated that 6,000 men will be in the woods at work the coming winter. The quantity of logs and square timber that will be taken out will be, it is expected, considerably in excess of that of the past season. Square timber has sold well, while lumber is in excellent demand. Shantymen's wages are 25 per cent. better than they were last fall, and 50 per cent. better than two years ago. They are about the same as they were some seven years ago, when the times were good and just before the depression in the trade. The rate of pay being given in the Ottawa Valley is as follows for the class of hands specified :—

General Hands	$15 @ 18 per month.
Log-makers	18 @ 23 "
Scorers	23 @ 28 "
Liners	30 @ 32 "
Hewers	32 @ 45 "
Foremen	40 @ 60 "
Cooks	30 @ 40 "

MISCELLANEOUS.

Up to the present time of writing 700 carloads of square timber belonging to the Scotch Canadian Lumbering Co. have passed this point for Quebec by rail. There are about 150 carloads yet to be brought down.

McLachlin Bros.' new mill at Arnprior is now running. It is built in the most substantial manner, and fitted up with the finest machinery made. The engine used is a 500-horse power one, and the largest in use in any Ottawa Valley mill. The entire cost of the new mill, complete, is about $120,000. The firm have shown a great deal of enterprise in building and fitting up such a splendid mill.

Improvements are being made in the vicinity of the Chaudiere. Just below the Union Suspension bridge a portion of the low water rock island is being removed. At high water it divided the current and caused it to be so strong along either of the docks that it was impossible for steamers to bring up barges to load until near the middle of June, six weeks generally being lost. It is thought the removal of rock will prevent this in the future. At the head of the Chaudiere slides a new bulkhead is being put in.

Later.

OCTOBER 25th.—All the saw mills in this locality are now running full time, the rise in the water having allowed a plentiful supply of logs to be got down. Recent rains caused the Ottawa to rise over a foot in a few days, and navigation of the river between this point and St. Anne's has been much improved thereby. Barges which were compelled to leave the Chaudiere with a little more than a half load for five or six weeks past are now able to carry some 50,000 feet more, and with a little further rise will be able to take their full loads. The freight business has improved within the past week, and will be brisk from now until the close of navigation. The saw mills will continue to run until closed by the frost, as the mill owners are anxious to produce all the lumber possible, owing to the present excellent demand. Owing to the lack of logs, caused by low water, the cut of lumber by the mills of this section this season will be greatly reduced. It is estimated that it will not be much more than two-thirds of the quantity manufactured last season. A great deal of time was lost by most mills, some of which have not averaged more than half-time, consequently the cuts of these mills will be scarcely more than one-half of what they should be, or what was counted upon at the beginning of operations in the spring.

The lumber market is firm, very few sales being made, as an increase of price is looked for by the lumbermen. In either lumber or freight rates there are no changes to note.

A great many men are being sent to the woods this fall, and indications are that more logs and square timber will be taken out than for many winters past. The wages paid are good, being considerably in advance of those of last fall.

The log drives on the Upper Ottawa and the Gatineau are progressing favorably, and will be got through all right now in the course of a couple of weeks.

Holland Brothers, of this city, are building a saw mill upon their timber property in West Portland, Ottawa County, and will have it running in the spring.

Men in the employ of the Upper Ottawa Improvement Company are counting the logs lying on the shores of Allumette Lake, which will not be brought down until next spring.

LONDON, ONT.

From Our Own Correspondent.

OCTOBER 22.—I read a long article in the London *Free Press*, of yesterday, of the discovery of immense tracts of pine lands discovered north-east of the Georgian Bay by Col. Wm. Mercer, a railroad engineer of great experience. He penetrated 100 miles up the Spanish River inland from Georgian Bay and found pine forests of an area sufficient to supply building material to Canada and the West for the next hundred years ! If all this is true, we have a bonanza. The Spanish River to the base of this widely extended land of pine is said to be wonderfully adapted as a logging stream, being devoid of rapids or other impediments its entire length. But we must await further developments before purchasing our "little hatchet."

Since my last letter two weeks ago there has not been much lumber moving in this market, and the expected spurt has not yet come, though merchants are not complaining and prices rule as high as when I last wrote you. I had a conversation last night with the largest lumber merchant here, and he informed me that there is the greatest difficulty in getting G.W. R. cars loaded from the north, but that in respect to G.T.R. cars there is no difficulty, in fact he says we are perhaps better off here in the West than the Toronto merchants find themselves. It is understood that the G.T.R., the Northern Railroad, and H. & N. W. combined have each put on 150 cars, making 300 cars, to be devoted especially to our western demands, and that these cars are not allowed to be sent east. The consequence is that lumber by the G. T. R. arrives promptly, and there are no reproachful epithets in the lumberman's vocabulary on this score.

Notwithstanding the quietness in lumber the demand for building supplies from the mills is very brisk, and nearly all here have abundance of uncompleted contracts on hand. The Messrs. Green's new mill is fast approaching completion and they expect to be at work again in about two weeks.

Mr. Hargreaves' estate is being rapidly wound up. The sale of the mill by auction took place yesterday and realized $1,300, upon which there is said to be a mortgage of $1,000. The contents of the lumber yard will be auctioned off to-day. The stock, however, is small, consisting of pine and hemlock, and some matched flooring and siding.

Shingles are now plentiful, but the prices are unchanged. Lath is also plentiful and unchanged.

My report for this market is,—quiet but firm, with prospect bright for the spring.

QUOTATIONS.

Mill cull boards and scantling	$10 00
Shipping cull boards, promiscuous widths	11 00
" " 10 and 12 in. stocks	11 50
Common boards, promiscuous widths	13 00
Scantling and joist, up to 16 ft	14 00
" " " 18 ft	14 50
" " " 20 ft	15 50
" " " 22 ft	16 50
" " " 24 ft	18 00
Common stocks	14 00
Common 2 in. plank	13 00
Cutting up plank and boards	18 00
Sound dressing stocks	17 00
Clear and picks	31 00
Three uppers, Am. inspection	35 00
¼ inch dressed and matched flooring	20 00
½ " " " "	20 00
1 " " " "	20 00
XXX sawn shingles, ₱ M	3 00
Lath per 1000 feet	4 00

DR. FOWLER'S EXTRACT OF WILD STRAWBERRY cures summer complaints, diarrhœa, dysentry, cholera morbus, cholera infantum, sour stomach, colic, nausea, vomiting, canker, piles and all manner of fluxes.

ST. JOHN, N. B.

From Our Own Correspondent.

The Muirhead, Snowball, and other large mills of the Miramichi, are now running full time, and there will be few logs left over this season.

Guy Bevan & Co., St. John, have a contract with P. Loggie to have four millions sawn this season. Mr. Loggie's mill has one of the Waterous 35-horse power rotary steam saws, and is doing thorough work, and although guaranteed to cut 20,000 feet per day, it has with the same engine, carriage, and saw frame, during the last four years, sawn inside of ten hours 34,000 superficial feet of spruce timber, and has averaged for the month 30,000 feet per day.

The weekly average for the season has been 28,000 to 31,000 superficial feet of 3 inch deals and inch boards per *diem*, and this from spruce logs, averaging 10 pieces to the thousand feet.

The quantity of shooks manufactured this year will be less than last, when 45,000 were made for shipping smelts to the United States.

The Harbor at the present writing has a bare appearance. Shipping is scarce and there is very little doing.

English freights are dull at present, there being little demand for tonnage. We hear of one charter being effected at 55s. for Cork Quay direct, and the steamer *Teddington* was taken at the same low rate.

American freights are firm, especially for Boston, for which port vessels can readily obtain $3.00 per M. The rate for New York is not quite so high, $3.50 being about the present figure.

The English market does not present any marked change to report. The price of deals should be better on the other side, as the stock in Liverpool is not so great as at this time last year. We append a comparative table of import, consumption and stock of N.B. deals in the Liverpool market from the 1st of February up to the 1st of October, 1880 and 1881 :—

	1880.	*1881.*
Import (standards)	59,963	40,003
Consumption	54,919	54,277
Stock	26,272	17,099

The American market is in as good a condition as when last reported. Lumher of good lengths and widths command ready sale, and laths are worth $1.75 in Boston, and $1.90 to $2.00 in New York.

Deals at present are scarce, and good dimension lots are worth $9.50. We have had heavy rains recently, which will be the means of bringing down a great many logs, and mills which have been before idle will very soon resume operations.

Oct. 22nd, 1881.

From Another Correspondent.

DEALS.

There is very little to remark with reference to movements in deals since the date of last report. Our stock was about exhausted at the first of the month ; shipments since have consequently been on a moderate scale, about keeping pace with the local production, so there is no material change in the position of the trade locally.

LOGGING OPERATIONS.

The preparations for operating in the woods the coming winter, have, as yet, shown very little activity ; there appears to be considerable doubt as to the extent the operations are likely to be carried on. The cost of getting out logs must be greater than for several years past; supplies and wages will all be higher, besides the increasing difficulties on account of the scarcity of trees, except at greater distances both for hauling and driving, all tend to add to the cost of the logs. It is doubtless owing to such considerations that operators manifest some hesitation in their preparations.

FREIGHTS.

There is no change to notice in the freight market. We quote 57s. 6d. as about the rate for Liverpool, London, etc., the few transactions of a recent date having been at or about that figure.

SHIPPING.

Since the heavy clearances on the first of the month, our fleet continues very small, and is not likely to be materially increased this season.

The following is a list of the vessels in port, with their tonnage and destinations :—

W. D. Wallet, 1413, Adelaide orders.
Malville, 924, Melbourne.
Adept, 1102, Liverpool or London.
E. Sutton, 545, West Coast of England.
Kilverdale, 1190, Liverpool or London.
Lalia, 391, Bougie, Africa.
Hypatia, 738, Liverpool or Bristol Channel.
Sarah B. Cann, 757, Liverpool.
Wm. Stephenson, 749, United Kingdon.
M. A. Palmer, 299, ——
Pusnaes, 503, United Kingdom.

SHIPMENTS.

The shipments of deals and other sawn lumber are as follows :—

For Europe	5,073,000	Sup. feet.
" United States	3,211,000	"
" South America	514,000	"

October 22nd, 1881.

ALBANY.

River freights are steady :

To New York, ₱ M ft.	$ @1 00
To Bridgeport	@1 37½
To New Haven	@1 37½
To Providence, Fall River and Newport	2 00@2 25
To Pawtucket	2 25@2 50
To Norwalk	1 25@1 30
To Hartford	@2 00
To Norwich	@2 00
To Middletown	@1 75
To New London	@1 75
To Philadelphia	@2 00

Quotations at the yards are as follows :—

Pine, clear, ₱ M.	$53 00@63 00
Pine, fourths	48 00@58 00
Pine, selects	43 00@53 00
Pine, good box	15 00@30 00
Pine, 10-in. plank, each	00 38@00 42
Pine, 10-in. plank, culls, each	00 00@00 22
Pine boards, 10-in	00 26@28 00
Pine, 10-in. boards, culls	00 18@00 19
Pine, 10-in. boards, 16 ft., ₱ M.	25 00@30 00
Pine, 12-in. boards, 16 ft	25 00@30 00
Pine, 12-in. boards, 13 ft	28 00@30 00
Pine, 1¼ in. siding, select	00 00@42 00
Pine, 1¼-in. siding, common	16 00@19 00
Pine, 1-in. siding, select	00 00@42 00
Pine, inch siding, common	16 00@19 00
Spruce, boards, each	00 00@00 16
Spruce, plank, 1¼-in., each	00 00@00 20
Spruce, plank, 2-in., each	00 00@00 30
Spruce, wall strips, each	00 11@00 12
Hemlock, boards, each	00 00@00 13
Hemlock, joist, 4x6, each	00 00@00 31
Hemlock, joist, 2½x4, each	00 00@00 13
Hemlock, wall strips, 2x4, each	00 00@00 10
Ash, good, ₱ M.	38 00@45 00
Ash, second quality, ₱ M.	25 00@30 00
Cherry, good, ₱ M.	60 00@70 00
Cherry, common, ₱ M.	25 00@35 00
Oak, good, ₱ M.	38 00@43 00
Oak, second quality, ₱ M.	20 00@25 00
Basswood, ₱ M.	25 00@28 00
Hickory, ₱ M.	36 00@40 00
Maple, Canada, ₱ M.	26 00@30 00
Maple, American, per M.	25 00@28 00
Chestnut, ₱ M.	35 00@40 00
Shingles, shaved, pine, ₱ M.	0 00@ 6 25
" 2nd quality	0 00@ 5 00
" extra, sawed, pine	0 00@ 4 40
" clear, "	0 00@ 3 30
" cedar, mixed	0 00@ 3 25
" cedar, XXX	0 00@ 4 00
" hemlock	0 00@ 2 25
Lath, hemlock, ₱ M.	0 00@1 62½
Lath, spruce, "	0 00@1 87½
Lath, pine, "	0 00@ 2 00

CHICAGO.

CARGO QUOTATIONS.

Joist and scantling, green, ordinary lengths	$10 50@11 00
Joist and scantling, green, 20 feet and over	12 00@15 00
Mill run, choice green	16 50@21 00
Mill run, medium, green	13 00@16 50
Mill run, common, "	11 75@13 00
Shingles, standard	2 35@ 2 45
Shingles, extra A	2 45@ 2 65
Lath	1 85@ 1 90

LAKE FREIGHTS.

Manistee	$2 37½@2 50
Muskegon	2 00
Ludington	2 12½@2 25
Grand Haven	2 00
Menominee	2 25
Sturgeon Bay	2 25 @2 37½
White Lake	2 12½
Ford River	2 12½@2 25

SAGINAW VALLEY.

The *Lumberman's Gazette*, of October 25, says there is a sharp demand in this market for good stock, and the coarser grades are meeting with a fair call. A number of eastern dealers are in the market picking up all the desirable lots that can be obtained. Some extra stock has been disposed of at big prices, sales being reported of 140,000 feet at $10, $20, and $35 ; 300,000 feet at $8, $16, and $36 ; 2,000,000 feet at the same figures by commission dealers ; 500,000 feet at $7.75, $15.50, and $36 ; 700,000 feet at $9, $18, and $38 ; 1,000,000 feet at $15 straight ; 500,000 feet at $7, $14, and $35 ; one choice lot at $10, $20, and $40 ; and a small lot of extra stock rom three circle Cass river logs at $19 straight.

The demand for shingles is strong, and all the stock offering is quickly taken. Standard brands XXX commanded $3.20@3.30, and clear butts $2.10@2.20.

The shipments of forest products from the port of Bay City for the week ending October 22nd were as follows :—

Lumber, feet	24,380,500
Shingles	3,130,000
Lath	800,000
Barrel headings	400

The total shipments of lumber, shingles and lath from the river for the season to October 22, were as follows :—

Lumber, feet	689,975,686
Shingles	123,709,000
Lath	14,508,000

General quotations are :—

Shipping culls	$ 7.00@ 9.00
Common	14.00@18.00
Three uppers	33.00@38.00

BOSTON.

OCTOBER 22.—The *Journal of Commerce* says the utmost satisfaction is expressed on all sides at the condition of the market and the good trade which has been enjoyed for the past three or four months. It is a long time since the yards could show such a small accumulation of stock on the approach of winter. This fact alone is evidence of what has been going on during the summer months. Choice grades of stock are just as dear, in the eyes of holders, as they were months ago, and consumers have to submit to current rates or go without a supply. Refuse and commons sell fairly, although they are not in the favor they once were. Hardwoods continue in good demand, and anything choice is held for high figures. Values generally are firm throughout.

CANADA PINE.

Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
" " 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

TONAWANDA.

CARGO LOTS—SAGINAW INSPECTION.

Three uppers	$40 00@45 00
Common	17 50@20 00
Culls	11 50@12 50

LIVERPOOL.

Messrs. Farnworth & Jardine report that business during the month has been very inactive ; there has been a small import, and the consumption has been correspondingly small, as is invariably the case when there is little landing. Stocks generally are ample, Baltic fir and spruce deals being almost the only exceptions, and these are unusually light.

Messrs. Duncan, Ewing & Co. state that with a moderate import during the past month there has been less pressure to make sales from the quay, and this, together with a somewhat languid demand, has lessened the apparent consumption. The market continues in a quiet condition, and any pressure of importations would most probably cause prices to give way.

Messrs. Dobell & Co., in their timber market report, dated October 1st, state that during the month of September the import of square timber of all kinds has been 8,000 loads less, and of deals and boards of all kinds 13,000 standards less than the corresponding month last year. Taking into consideration this curtailment in imports, we think the consumption during the month may be considered as fairly satisfactory. There is, without doubt, a better feeling in our trade, but we would wish strongly to impress upon shippers that this cannot be matured into any tangible improvement, unless we have very moderate imports for the next few months. Spruce deals have advanced in value, and are now firmly held at £7 5s., at which price late sales of St. John have been made.

LONDON.

The *Timber Trades Journal*, of Oct. 8, says that at a sale on the 5th Quebec goods were dull, and several parcels were submitted under reserve without elicting a bid. These were all first-class shipments, but possibly buyers did not care to venture a bid, not knowing where it might land them. The upset price of 3rds, 3×11 in., 12 and 13 ft., Gilmour's C brand, ex *Arran*, imported last year, was £9 15s., and for the 4ths £8 10s. to £8 15s., while undersized were quoted at £7 5s. A portion of the goods imported last July ex *St. Pauli*, also from Quebec, were quoted even lower than those just enumerated without finding a buyer, viz., £9 for 11 ft., and £8 15s. for 9 and 10 ft. These figures seemed reasonable enough to tempt speculators, but whether they were within the holding price we cannot say. It is very likely another 5s. would have secured them. Buyers, however, like to make the prices for themselves ; nevertheless several parcels of reserved goods of other descriptions were sold without any difficulty. Compared with what low quality stuff from the Baltic ports is now obtaining, the Quebec prices would not be dear at another 10s. We have the assurance of the Quebec papers, and other information from private sources, that the production is not likely to be as much as was expected ; while the trade between the Dominion and the United States in pine logs is continually increasing, which must tell sooner or later on the supplies of pine to this country. Still either the stuff is not consumed here at its former rate, or else it meets with more favor outside the saleroom ; anyhow offered under the hammer goods of the kind appear to move slowly, while for other descriptions the demand seems unabated.

We have added to our plant all the latest improved machinery for Electro and Stereotyping, and the manufacture of Printers Furniture, facilities for executing work which no other establishment in the Dominion possesses, and not excelled by any on the continent. A large assortment of various cuts constantly on hand.

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4 QUEEN STREET EAST, TORONTO, ONTARIO.

Trusses for HERNIA, Rupture,

The most Durable and Beneficial kind known to Medical Science always in Stock, and fitted to the Body at Reasonable Prices.

BATTERIES FOR BATHS,

Of Special Sizes, made to order, both for Public and Private Use; and FARADIC BATTERIES always on hand. PRICES LOW. 1yl17

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MONTREAL

Manufacturers of

LEATHER BELTING

Fire-Engine HOSE,

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Mill Supplies, &c.

National Manufacturing Company

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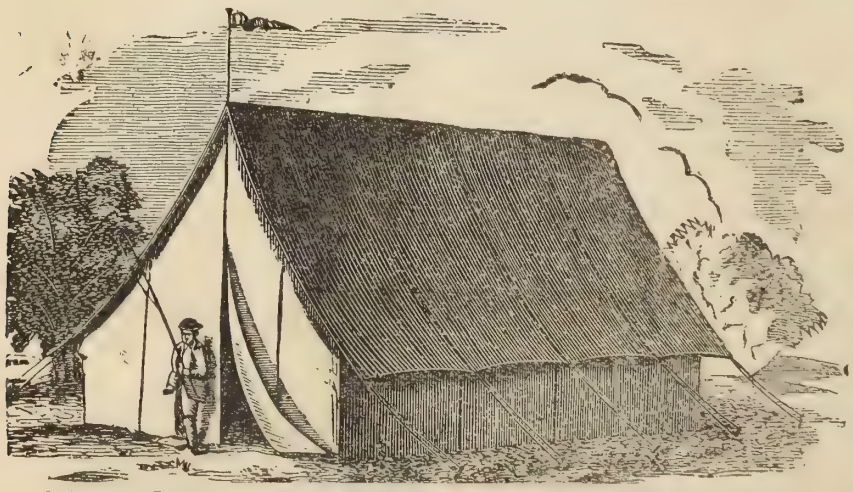
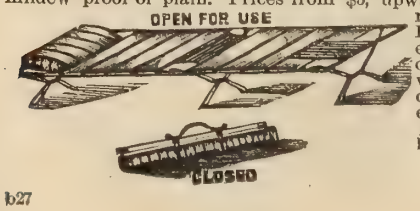


manufacturers of Tents for Lumbermen, Sportsmen, Camp Meetings, Photographers, Lawn and military Encampments, with or without extra roofs, all sizes and styles, white or fancy striped, mildew proof or plain. Prices from $5, upwards. Flags of all descriptions, (regulation sizes) made of the best of silk-finish bunting. CAMP BEDS (Bradley's Patent) the best bed ever invented; size when folded 2 x 6 in.; 3 feet long, weighing only 11 pounds, but strong enough to bear the weight of any man. Waterproof wagon and horse-covers, tarpaulins sheets, coats and leggings of every description made to order on the premises. ☞Special rates to Lumbermen. Send for catalogue and price list to



NATIONAL MANUFACTURING CO.,
202 Sparks Street, Ottawa

b27

Wrought Iron Shanty Cook Stoves

The Best Article ever offered to the Trade.

I have much pleasure in drawing attention to my **WROUGHT IRON COOKING STOVE**, for **Shanty, Hotel and Boarding House use.** These Stoves are made of **Heavy Sheet Iron**, the top and lining of the fire-box being of **Heauy Cast Metal** and all the connecting parts of substantial **Wrought Iron Work.** The dimensions of these Stoves are as follows:—

SINGLE OVEN STOVE

Top surface contains six 10-inch holes, with ample room between, and one oven 16 x 24 x 26.

DOUBLE OVEN STOVE

The Double Oven has a top surface containing twelve 10-inch pot holes, with two ovens, each 16 x 24 x 26. One fire-box of suitable size for area to be heated. Below will be found Testimonials from some of the leading Lumbermen, who have used my Wrought Iron Cook Stoves since I commenced manufacturing them. They are the names of gentlemen who are well known and reliable, and will carry more weight than any recommendation of my own could do.

The Best Stove I have ever Used.

PETERBOROUGH, May 31, 1880.

ADAM HALL, Esq., Peterborough. Dear Sir,—I have used your Wrought Iron Cooking Stove in our lumbering operations since its introduction here, and have no hesitation in saying that I prefer it to any other. For durability, economy and efficiency, where a large number of men are employed, it is the best stove I have ever used. You can, with confidence, offer it to hotels, boarding houses and lumbermen.

Yours truly, THOS. GEO. HAZLITT.

The Stove for Lumbermen.

PETERBOROUGH, June 1st, 1880.

ADAM HALL, Esq., Peterborough. My Dear Sir,—We have used your Wrought Iron Cooking Stove and find it is very satisfactory for lumber operations, especially so on drives. We can recommend it highly.

Yours truly, IRWIN & BOYD,

Gives the Greatest Satisfaction.

PETERBOROUGH, June 3rd, 1880.

A. HALL, Peterborough. Dear Sir,—I have had the Wrought Iron Cook Stove, purchased from you, in constant use ever since last fall, and it gives the greatest satisfaction in every respect. I can recommend them highly to any one who is in the lumber business. Very truly yours, GEO. HILLIARD, M.P.

EVERY STOVE GUARANTEED

All the necessary TINWARE and CUTLERY for Shanties suppied at the Lowest Prices.

ADAM HALL, Peterborough.

The Best Axes in the World!

Single, Double and Triple Steel, 28 Patterns.

Warranted Good or Exchanged.

And Burrell's, Warnock's, and Dundas Axes, made specially for the Lumber Trade, repacked any weights without extra charge. Lindsay Pattern of Broad and Blocking Axes. LANCE TOOTH SAWS, warranted good. P. Jewill & Sons (Hartford, Conn.) LEATHER BELTING. 2d CUT FILES. LATH YARN. Mill and Shanty Hardware. No. 1 LARD OIL. Heavy HAMES, BUCKLES and HARNESS TRIMMINGS. Ballard and other RIFLES, from $10 each. Large assortment of CARTRIDGES.

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Importer, Jobber and Retail Dealer in Hardware. 12l17

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HAMILTON, CANADA.

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EMERY and CORUNDUM WHEELS

These Wheels are Wire Strengthened

And Specially Adapted For Saw Gumming

Neither Animal nor Vegetable Glue or Gum being used in their composition, they are NOT LIABLE TO HEAT, and give out no Odors, while

They Surpass All Other Wheels for Free Cutting and Durability.

We refer to the following well known Saw Manufacturers for Opinions as to the Quality of our Wheels :

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JAMES ROBERTSON, ESQ., MONTREAL.

Messrs. JAMES ROBERTSON & CO., TORONTO.

WE ALSO REFER TO

WILLIAM HAMILTON, ESQ, PETERBOROUGH, Manufacturer of the Covell Saw Sharpeners.

Messrs. H. B. RATHBUN & SON, DESERONTO, Lumber Merchants.

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Cast Steel Table Cutlery!

Best Cast Steel, Warranted.

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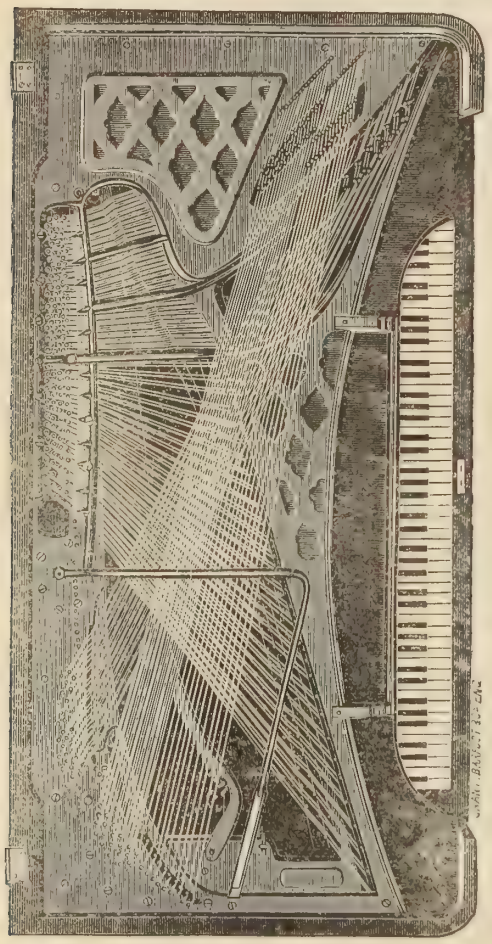

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The Bell Organs have just received the HIGHEST AWARD and SPECIAL PRIZE (Gold Medal) at the International Exhibition, Sydney, Australia, this year for their Organs over all the English and American makers. This, along with the unlimited awards, prove that

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WE RECEIVED

Medal and Diploma.....Provincial Exhibition 1871
Medal and Diploma.....Centennial Exhibition, 1876
International Medal and Diploma, Sydney, Australia, 1877

WE RECEIVED

Only Medal for Parlor Organ, Provincial Exhibition, 1873
Only Medal for Parlor Organ, Industrial Exhibition, 1879
And Gold Medal.....at Sydney, Australia, 1880

The Bell Organ Manufactory is the Largest and Oldest in the British Empire, and the fact that we have sold nearly 15,000 proves that they are the best in the market. We GUARANTEE ALL OUR ORGANS for five years Correspondence invited. Illustrated Catalogue mailed free.

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GRAY'S PATENT

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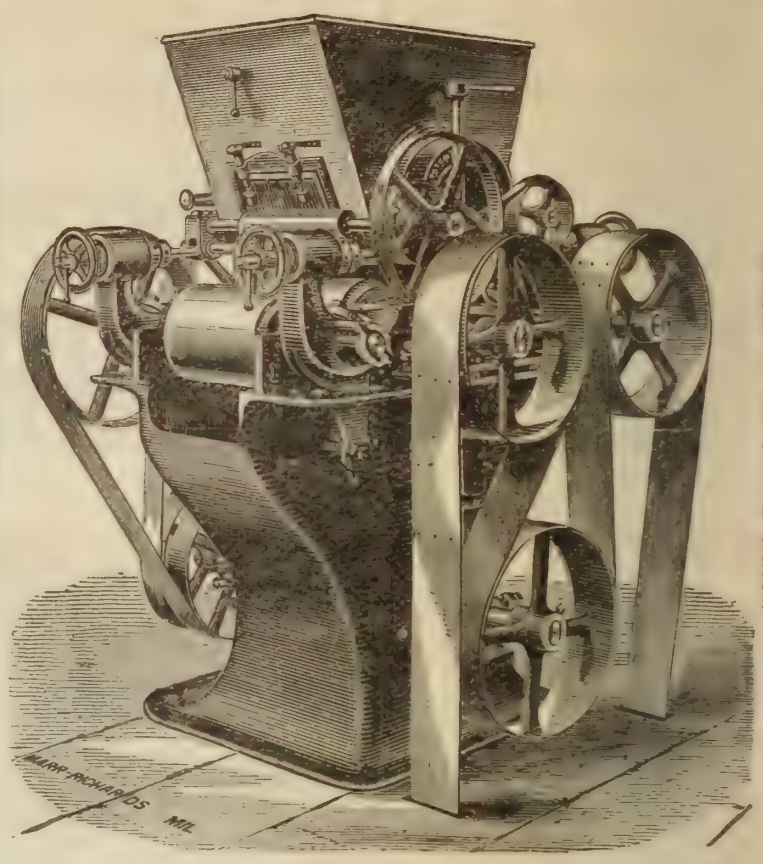
A Model of Perfection!

Every Mill a Success!



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Smooth Iron or Porcelain ROLLS.

The Machine is Perfect in all its adjustments, and RUNS WITHOUT NOISE.

It is doing Better Work than any other Machine in use.
Automatic Lubrication of Principal Bearings.
Driven entirely by BELTS.
Differential Speed always insured.

WEYMAN'S NEW IMPROVED PATENT

Porcelain Rolls

The BEST ROLL FOR MIDDLINGS in the world. Over 6000 in use in this country and Europe. Send for particulars.

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Manufacturers of Improved Hoisting Machinery, MINING and CONTRACTORS' PLANT. Importers of BEST STEEL WIRE ROPE. Mention this Paper.

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LUMBERMEN

Will always find a Large Stock of

Shanty Blankets

AND

HORSE BLANKETS

At LOWEST Mill Price, at

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TORONTO.

Send Sample Order for our LINED SHAPED HORSE RUG, a Specialty, highly recommended for Wear and Warmth

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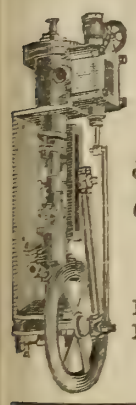

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Steam Engines, Rotary Pumps, of all sizes, for Paper and Pulp Mills, Steam Pumps, and a Variety of other Pumps, Propeller Engines for Yachts & Tow Boats.

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Iron Railings, Hoisting Machines for Stores, Jack Screws, Park Mills, all kinds of Machinery for Mines, Saw Mills, Flour Mills.

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Every Variety of Heavy and Light Casting.

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Foundry and Machine Shop on City Road,

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BOILER FEED PUMPS,	MINING PUMPS,
AIR AND CIRCULATING PUMPS,	PUMPS SPECIALLY ADAPTED for
STEAM FIRE PUMPS, and	OIL PIPE LINES,
WRECKING PUMPS.	And CITY WATER WORKS.

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We are the most Extensive CLOTHIERS in Canada.

We carry a STOCK of FIFTY THOUSAND DOLLARS to choose from.

We watch the interest of our Customers. Our stock is FULL of the very best goods in Scotch, English and Canadian Tweeds.

We BUY and SELL for Cash, therefore it enables us to do business on very SMALL PROFITS.

NOTE THE PRICES.

We give a Good Tweed Suit for.....$6 00
We give a Good Tweed Pants for..... 1 50
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When you visit Toronto, come direct to OAK HALL, and fit yourselves out with a Good Suit. Remember the address:—OAK HALL, the Great One Price Clothing House, Toronto, opposite St. Jame's Cathedral.

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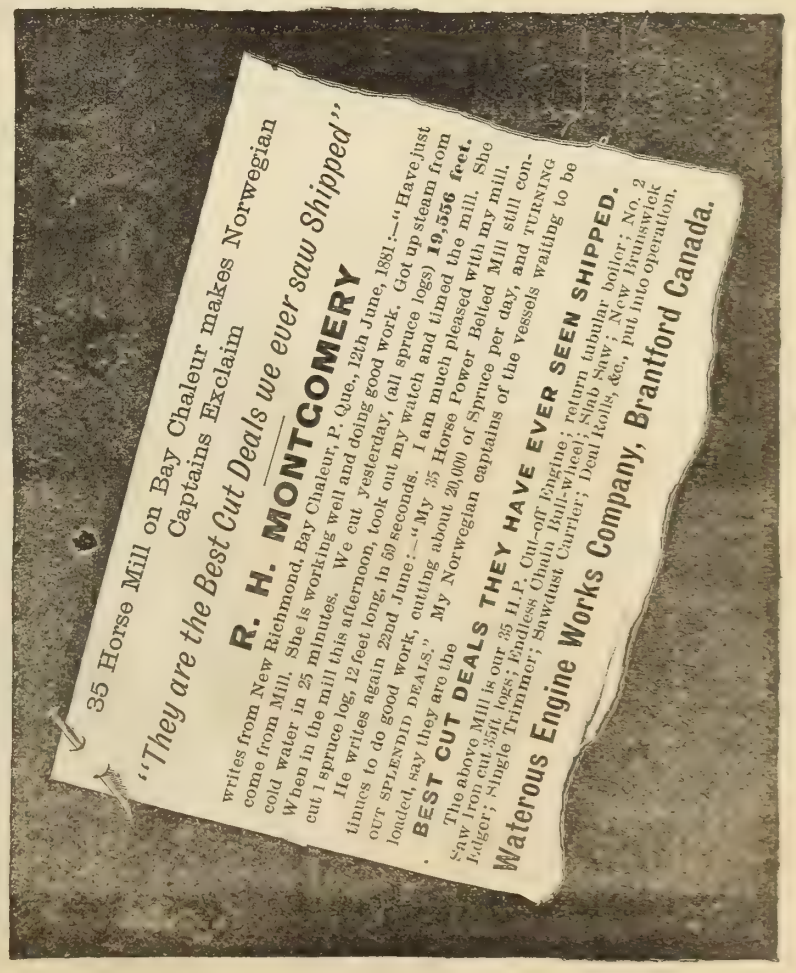


EMERY WHEELS FOR SAW GUMMING!

Solid Emery Wheels are now almost in universal use for the purpose of gulleting and gumming saws. Statistics show from 25,000 to 30,000 saw-mills in the United States. Many of these run only a single saw each. A one-saw mill would use one or two wheels a year, costing $3 to $4 each, and when such small mills order single Emery Wheels from the factory, the express charges often equal the cost of the wheel. There was a time when the quality of Emery Wheels was so uncertain, and the demand so fickle, that storekeepers could not afford to carry them in stock. Now, however, Saw Gumming Wheels have become as staple an article as Files, and every dealer in saws, Hardware and Mill Supplies can afford to carry a few dozen standard sizes in stock. Large dealers order stocks of $500 to $750 worth at a time. Saw Gumming Wheels are used with the edge (or face) square, round or beveled. Probably seven-eighths of all in use are beveled.

The principal sizes are:

8x1/4, 8x5/16, 8x3/8, 8x1/2 } 3/4 in. hole. 10x1/4, 10x5/16, 10x3/8, 10x1/2 } 3/4 in. hole. 12x1/4, 12x5/16, 12x3/8, 12x1/2, 12x5/8, 12x3/4, 12x7/8 } Holes, 3/4, 7/8 and 1 inch.

Probably more wheels 12x3/8, 12x1/2 and 12x3/4 are used than all the other sizes together. Saw Gumming Wheels are used, however, of all sizes up to 24x1 1/2. The most frequent complaint is that Emery Wheels harden the saw so that a file won't touch it. The answer is that you don't want a file to touch it. An expert workman will shape and sharpen the teeth with an Emery Wheel, leaving the teeth *case hardened*, in which condition the saw will cut about 33 1/3 per cent. more lumber than a soft saw will. Those who want to use the file, however, have only to touch the saw *lightly* a second time (after going all over it once), and this second touch will cut through the case-hardened scale.

A QUESTION OF QUALITY.

Thirteen years of experience as makers of, dealers in, and actual users of Emery Wheels, have led us to a decided opinion as to what quality is the best. We prefer for almost every use an "Extra Soft" wheel like the "Pocono." We believe that money lost through the rapid wear of the wheel is more than made up by the money saved on wages. As we cannot get every one to adopt our views, we make several qualities, so as to meet their views. We say to those who think they can only be satisfied with some other make of wheels (not Tanite), that we can furnish qualities *to match* any and every other make. If you have got used to some special quality of wheel, let us know what it is, and we can send you *a Tanite Wheel of similar quality*. Our *regular* classification of Saw Gumming Wheels is as follows:

CLASS 2. MEDIUM—HARD.—This Wheel is THE STANDARD Saw Gumming Wheel all over the world. Probably seven-eighths of all the Saw Gumming Wheels used are "Class 2. It cuts fast and keeps its shape well. Some think it too hard, some too soft. We prefer the "Pocono."

CLASS 3. MEDIUM—SOFT.—The same as to coarseness and fineness as "Class 2," but a *softer*, and therefor freer cutting wheel.

CLASS "POCONO." EXTRA SOFT.—This Wheel we prefer to all others. It is both *finer* in grain and softer than either of the above. As a Saw Gumming Wheel, Class "Pocono" is specially suited to those practical and experienced Sawyers who know how to grind with a light touch, and who want a free cutting wheel that will not create much heat.

Illustrated Circulars and Catalogue, showing Cuts of Saw Gumming Machines, and Shapes, Sizes and Prices of Wheels, sent free on application.

L13

The Tanite Co. Stroudsburg, Monroe Co. Pennsylvania

CANADIAN TRADE SPECIALLY SOLICITED.

M. Covel's Latest Improved Automatic Saw Sharpener!

Is the Most Perfect Machine that has ever been Introduced into Mills for that purpose.

CIRCULAR SAW STEAM FEED!

I would also call special attention to my

Heavy Circular Saw Mills

and for STEAM MILLS, would recommend the Steam Feed, having put in several which are giving the best of satisfaction, as will be seen by the following testimonials:—

GRAVENHURST, August 20th, 1880.

WM. HAMILTON, ESQ., Peterborough.

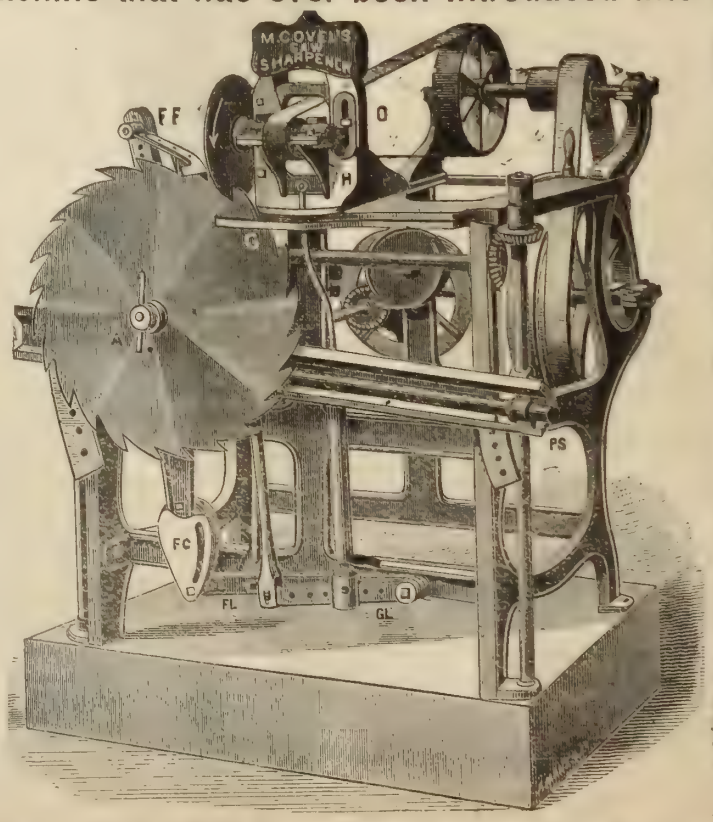
DEAR SIR—I have used your Steam Feed for near four months, and it has given me perfect satisfaction in every way; it is admitted by every person who has seen it work to be the best feed ever invented. Since I put it into my mill, I have not lost ten minutes time fixing anything belonging to it. I can cut 18 boards 13 ft. long in one minute. It can do much smoother and better work than the pinion feed. It is easily governed and reverses the carriages instantly. I am thoroughly satisfied with it and can recommend it to any person who has a Circular Saw Mill for cutting long or short logs. I consider I have cut more lumber than will pay for the Steam Feed since I got it than I would have cut had I not put it in.

Yours respectfully,
WILLIAM TAIT,
Lumberman, Gravenhurst.

TORONTO, August 11th, 1880.

WM. HAMILTON, Peterborough, Ont.

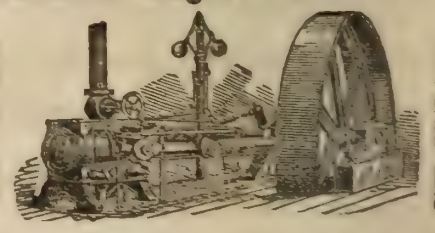
DEAR SIR—The Steam Feed you put in is working splendidly. Yours, &c.,
THOMPSON, SMITH & SON.



MILL MACHINERY!

I am also manufacturing Saw Mill Machinery, for all sizes of Gang or Circular Mills, Span or Double Circulars for Slabbing Small Logs. My Patent Jack Chain for drawing logs into Saw Mills, acknowledged by all to be the Cheapest and best ever got up; also, my Patent Lumber Markers, different sizes of Edgers, Gang Lath Mills, Trimmers, Power Gummers, and all Machinery used in a first class Gang or Circular Saw Mill; also, small Hand Gummers for use in the woods, for Cross-cut Saws. Rotary Pumps of different sizes, for Fire Protection in Mills, &c.

Horizontal Engines and Boilers

CORLISS  ENGINES

Where economy of fuel is the great consideration, along with uniformity of speed, such as is required in Grist and Flouring Mills, Woollen and Cotton Factories, or large Factories of any kind, I supply the Corliss Engine. I feel justified in saying that our Style, Workmanship and Finish on this Engine will be no discredit to its renown, and certainly is not equalled in this country for economy of fuel. I have them working at 2 1/2 pounds of coal per horse-power per hour.

L10

WILLIAM HAMILTON,

PETERBOROUGH, ONT.

THE CANADA LUMBERMAN

AND MILLERS' MANUFACTURERS' AND MINERS GAZETTE.

PUBLISHED SEMI-MONTHLY.

The only Newspaper devoted to the Lumber and Timber Industries published in Canada.

SUBSCRIPTION $2.00 PER ANNUM.

VOL. 1. PETERBOROUGH, ONT., NOVEMBER 15, 1881. NO. 26.

THE new mills for the Georgian Bay Lumbering Co. are under contract and the work is being pushed on with the greatest speed. The machine shops are built and taken possession of, and the stone foundation of the mill is nearly completed.

A. J. GEIGER, Philadelphia, is reported as having the largest lumber warehouse under one roof in the United States. It is 164 feet wide and 200 feet long. It required 13,000 square feet of tin for the roof, which is so arranged that it can be opened when the weather is fair, and closed when it is stormy.

THE ONTARIO BANK.

We regret to learn, directly and indirectly, that some of the depositors and note holders of the Ontario Bank have become alarmed at recent developements, and are withdrawing their deposits and refusing to take its notes as usual, notwithstanding that there is not the slightest ground for alarm on their part.

Did we for a moment think that there is the slightest possibility of any of its creditors suffering inconvenience, much less loss, by the Ontario Bank, we should be the the last to discouraging them taking every possible means of securing themselves, but as matters stand we deem it our duty to discourage everything tending to discredit this Bank's entire solvency so far as the public is concerned.

It is unfortunately too true that through past management, a considerable portion of the Stockholders' money has been lost, but taking even the most gloomy view of the state of its affairs, and accepting Mr. Holland's report as certain to be fully realized, the bank still possesses undoubted assets, which amount to within a fraction of one hundred and thirty-five cents for every dollar which it owes to the public. But perhaps the best evidence that the Bank is thoroughly solvent so far as its credi tors are concerned, is the fact that notwithstanding Mr. Holland's proposal to reduce each $100 of its present stock down to $50, yet the speculators in both the Montreal and Toronto markets are paying about $60 for every $100 of its present stock or for every $50 of the new stock, which is equal to a premium of twenty per cent. on the stock as reduced. This is the strongest possible proof that those most likely to be best informed still place a very substantial value upon its stock, and believe that things are likely to turn out much better than Mr. Holland's estimate. Be that as it may, however, it is quite clear that this stock cannot be worth a single cent, unless there be a surplus after paying every creditor. The Stockholders are the only ones which can suffer by the bank's losses, and that being the case we have no hesitation in strongly deprecating any action on the part of any of its creditors calculated to increase the already serious loss of its proprietors.

CANADA'S RESOURCES.

IMMENSE TRACTS OF PINE LANDS DISCOVERED NORTH OF THE GEORGIAN BAY.

Col. William Mercer, a railway engineer of large experience, passed through Chicago a day or two ago to commence the survey for the Quincy, Vandalia and Eastern road. The Colonel brought the first tangible information from the mysterious exploring expedition which recently left a port on the Lake Huron shore and proceeded to the mouth of Spanish River, on the Georgian Bay, where they dismissed the steamer which had taken them thus far, and took to small boats, in which they proceeded up the river one hundred and fifty miles, penetrating a region little known to the white man, and which the Candian Government has never yet

SURVEYED OR EXPLORED.

The expedition was gotten up so quietly that only a few persons interested in the result of the exploration knew of its destination. Its abandonment of the steamer on the shores of the Georgian Bay was a matter of wonderment even to the officers of the boat, who could not, though they tried hard, guess the object of all the preparations which they found awaiting the voyagers at the mouth of Spanish River, and the extended trip of the adventurous little party at least awakened in the minds of friends at home fears that some serious disaster had overtaken them in this wild and unknown region. Launched upon Spanish River, the voyagers proceeded leisurely, noting the depths and currents of the stream, the magnitude of which surprised them more and more as they ascended. Reaching a point 100 miles inland from the Georgian Bay and the limit of Government surveys, the party landed and prepared to penetrate the great unexplored region before them. Here began the work that from its results may in the not far distant future open up a new and almost inexhaustible source of lumber supply. This, in fact, was the primary object of the expedition—to investigate the resources of this region as regarded the growth and quality of pine timber, and discover if such forests, could they be found, could be utilized when the pine supply of Michigan should be exhausted.

Establishing a base line six miles in length, the surveyors moved forward, sending outside parties, and in this way covered an area of 75 square miles. They found the pine timber of a superior quality, exceeding that of the Michigan forests, and in such quantities as to convince them that they had discovered a source which would furnish building material for Canada and the West

FOR THE NEXT HUNDRED YEARS

at least. It was estimated that the area surveyed by them would furnish 24,000,000,000 feet of lumber, and they had not begun, according to the Indian guides, to penetrate this immense forest tract. The explorers also encountered small streams connecting with the Spanish River, which, in the event of the future tapping of this great lumber supply, would serve admirably in floating the logs to the greater stream, which is free from rapids and well adapted to the logging trade. The value of this great pine forest will perhaps be better understood when it is stated that the entire stock of uncut timber in the state of Michigan is estimated by practical engineers at only 35,000,000,000 feet.

In addition to this immense lumber supply, the party found evidences of

VARIED AND EXTENSIVE MINERAL DEPOSITS,

which of themselves will in time serve to open up this great wild region to the fuller and freer knowledge of the enterprising white man.

Spanish River, according to Col. Mercer, is from its mouth to its rise, or as far as the ex pedition navigated it, a splendid stream, devoid of rapids or other impediments its entire length. It runs through a grandly picturesque country, with lofty cliffs and jutting precipices interspersed here and there with lengthy reaches of high plateaus. Its waters are of a good and uniform depth throughout. This river, to gether with the Ottawa River—the one running south west and the other south-east—serve as the

GREAT DRAINING AND IRRIGATING ARTERIES

to this widely extended land of the pine. The Ottawa River, however, is obstructed by frequently recurring rapids, and as a logging stream has many disadvantages which could not be overcome without the application of immense labor and expense. Plodding along through this almost interminable wilderness of pine, the explorers were surprised and gladdened by the voice of man coming from a source least expected—in fact, they ran upon a party of engineers engaged in the work of surveying for

THE CANADIAN PACIFIC RAILWAY.

Mutual greetings and congratulations were exchanged. The railway surveyors had long since cut loose from civilization, and yearned for some means of communication with their fellow-men. In accordance with these hopes and longings their daily accumulations of mail matter had been kept in the best state of preservation and at the foremost front, ready for any chance benighted party like themselves who would volunteer to carry them to their destination. This package of letters, which had assumed a goodly bulk, was taken in charge by our pioneers and religiously packed with their choicest instruments, in order that their charge might be properly regarded and respected.

Col. Mercer, who has been bred to eminent practical work, soon found occasion to question his newly acquired friends with regard to the prospects and ultimate intentions of the Canadian Government touching this great railway project. He had, through his own knowledge of the country, discovered that this road must pass through

NEARLY 1,000 MILES ENTIRELY UNINHABITED,

in the largest portion of which the print of the Indian moccasin has never been seen; and yet the Colonel, who is, as has been before stated, an eminently practical man, could not see how a road through such a country could be made to pay. To the casual observer it would appear that this vast tract of timber, with the accompanying mineral resources, as discovered by this exploring party, gives promise of a successful future to the railway enterprise that at its inception has such a wide and otherwise apparently unprofitable gap between its remotely separated termini.

Gilmour's New Mill.

The *Advocate* says that the work on Gilmour's new mill at Trenton is being pushed with great energy. Mr. Proper has arrived and is executing the plans made by Mr. Hall, who is the draughtsman and architect. The frame of the mill proper is made in sections, each story being a section. The frame is up and also the two extension wings. The men are putting on the roof as fast as possible, so as to have it enclosed before the cold weather sets in. It is a collossal frame in the size of its timbers and the area it covers. Mr. Proper tells us one gang similar to those to be put in cut 123 logs in one hour. Mr. Lester, sr., is pushing the new smoke stack rapidly to completion. On Saturday it was within 30 feet of its height. Messrs. Crow & Sansom are driving on the boiler house with all the forces they can well set to work. The front of the new boilers, which will be tubular, will be reversed to face the west, thereby securing a better draught. The Miller Bros. have completed the stone foundation except the centre stone work that is to bind the immensely large gangs to the rock. There is to be three feet of rock excavated, and then large bands of iron will be laid down and stone work twelve feet thick built over these irons, so that the gang under great weight, when screwed down to the irons, may be free from shake or jar. Mr. Gilmour, the engineer, has had four boilers put in position in the new boiler house in connection with the planing mill, and two of the boilers now supply steam to the mill. The new engine will shortly be in position, and then the preseut small engine will be kept for electric light or force pump purposes. The "Gehena" is about 100 feet out west of the large mill, and looks like a great circle of rough hewn stone. It will be surmounted with an iron furnace 30 feet in diameter, into which refuse stuff from the mill will be thrown, and will be kept burning day and night while the mill is in operation.

BLACKSTONE, the name of England's greatest lawyer, and the name of a well known lawyer's pen of Esterbrook's make. The stationers have them.

OUR QUEBEC LETTER.

From Our Own Correspondent.

A LARGE SALE—PRICES OF OTHER TRANSACTIONS—STOCKS WINTERING—FURTHER PREPARATIONS FOR THE WOODS—A FREIGHT DIFFICULTY—WRECKED CARGOES—MINING NOTES.

QUEBEC, Nov. 9th.—There is never very much to report at this season concerning the lumber trade, and the present fall is no exception. There will be very little more timber shipped here this season, the last cargoes being now stowed away. There are not half a dozen timber ships now in port, and these are principally taking in deals for London and Glasgow. In another ten days the last of them will have sailed out of port, and in ten days more the harbor may be covered with a sheet of ice.

Since my last letter the whole of the fine lot of square white pine, shipped to this port this fall from above Ottawa by the Q. M. O. & O. R. R., and consisting of about 7,100 car loads, has been sold to one purchaser,—Messrs. A. F. A. Knight & Co. The price at which it changed hands has not transpired, but it is reported to be pretty well up to last published quotations. This sale involves somewhere about $200,000.

Mention may also be made of a good raft of white pine, consisting of square and waney, which has been sold during the past week, the square averaging 48 feet, at 29 cents, and the waney about 17 inches, at 32 cents.

The Nagle raft has been sold here to Messrs. R. R. Dobell & Co. For it also 29 cents has been paid for white pine, but of 52 feet average, and 32 cents for waney of 18 inches.

Red pine has been sold at 25½ cents for 40 feet average, and 13 cents for 26 feet average.

No other lots have of late changed hands, nor are any sales of oak or other hard woods reported. Brokers state that prices have not changed for other kinds of timber, but there being no sales to report, it is not, of course, possible to give figures that all will consider correct. As may readily be imagined from the sales above reported, and the small stocks hitherto held here, there is not much to winter in first hands. Mr. J. Bell Forsyth is just now collecting details of the Quebec stocks for his annual report and statement. Until the various returns are in it will be impossible to give figures.

Lumbermen's agents are just now busy in getting good lumbermen for the woods. Mr. D. B. Charleson, of Sarnia, is here and has sent up several gangs to get out oak on the scene of his last season's operations. From all that can be so far learned, it appears that about the same amount of timber will be got out of the woods in Canada this winter as last.

The packing box industry, which gives employment to a large number of hands at Montmorenci and New Liverpool, threatens to suffer somewhat by a curious freight difficulty. The Grand Trunk Railway, it appears, refuse to furnish more cars to transport the boxes to the States, on the ground that American railways, when they can get Canadian cars upon their lines, run half their life out upon their own roads before returning them, just, as it was recently alleged, was done with American mail bags by the Canadian postal authorities.

The latter portion of the Quebec Fall timber fleet has been very unfortunate this season in the Lower St. Lawrence, something like six vessels loaded with timber, deals, &c., having been wrecked on their way home from this port. The value of the cargoes amount to over $80,000, but of course in some instances all, or at least a good portion, of the freight will be saved.

MINING NOTES.

A good deal of competition is anticipated here at the approaching sale by auction of Government mining lands. In Beauce matters are now proceeding very quietly, and rumour says that remunerative yields of gold have been found this season. Mr. Juncker, French engineer from Paris, sent out purposely to report upon the Beauce Mines, has completed his investigation. His report will not, however, be given to the public until after it has been submitted to the French capitalists.

There is some talk of opening up a new silver mine in Charlevoix, but nothing has been definitely done so far in the matter.

SUBSCRIBE to the CANADA LUMBERMAN.

BRACEBRIDGE.

From Our Own Correspondent.

LIVELY TIMES—WAGES DROPPING—A LARGE CUT PROMISED—TIMBER SALES—EXTENSIVE IMPROVEMENTS BY THE MUSKOKA BOOM CO.—TIMBER HUNTING FEVER.

NOVEMBER 4th.—Since I last wrote you things have been lively here. There have been a great many going into the woods. The prospects are that there will be a larger stock got out the present season than last. Everyone agrees that the work is much farther advanced now than at this time last year, and although men were scarce and wages much higher, there is a much better class of men in the woods now, and wages are going down, $18 to $20 being about the ruling wages now. The cut of board pine will also be larger than last year, but it is too early yet to give any figures. The weather has been very wet for the last month or more, and the streams are all up nearly to spring level. S. S. Cook is taking advantage of this on the Little East River, and has started to drive out his timber that was stuck there last spring; although it is late, if the weather keeps mild they are likely to get it out.

The drive on the Muskosh has reached the mouth, but it is not sorted yet, and is not likely to be this fall. Its progress has been very slow, owing to the lowness of the water in the spring, and so much west wind during the latter part of the season. It is to be hoped that the Boom Company will have better luck next year. I see that they are doing some very necessary improvements, viz., on North Branch, dam at Mary's Lake, which is completed; also a slide at Wilson's and another at Bracebridge; on the South Branch, a dam at Baysville, and a slide at Hannah's Falls, both of which are completed; besides a slide at Grey's Falls, on the Muskosh, and I believe they contemplate a dam and slide at Moon River. This will about complete the improvements necessary on the rivers.

Owing to the Government having advertised a sale of limits, the upper portion of our district is swarmed with timber hunters, and from present appearances, if they are all as anxious to buy as they are to get information, they will go high, for the fever appears to be at its height just now. Nearly all the timber to be sold will come down the Magnetawan and French rivers, and a good portion of it through Lake Nipissing. Some few of the mills at Gravenhurst have shut down, but the majority of the mills that get their stock from this district are running yet, and will run until it freezes up, but the cut will not be as large as was anticipated in the spring, the low water having kept back the logs.

Several timber limits have changed hands here lately. The Muskoka Mill and Lumber Company bought from Cook & Bros. the south half of Perry, and the north-east corner of Franklin, it is said, for $23,000; and Caldwell & Son sold the south portion of Franklin for $14,000, and H. H. Cook sold six miles in Morrison for $11,000. There have also been numerous smaller purchases.

The article in your last issue, copied from the *Christian Guardian*, is a little hard on the shantymen, I think. The correspondent is one of those that likes better to write than to go and see for themselves. It is quite evident that he does not know what he is writing about.

A number of our lumbermen are now in Toronto as witnesses in the suit between Petrie and the Guelph Lumber Co., no doubt very much against their will at this season of the year.

Mill Refuse Furnaces.

During the last week there has been shipped from Mr. W. Hamilton's foundry the prepared material for two mill refuse furnaces, one for Byng Inlet, and the other for Port Severn. Another will shortly be shipped to Waubaushene, and an extra large one will be made during the winter for shipment to Trenton. These burners, or furnaces, are immense circular structures of plate iron, lined with fire brick. They are from twenty to thirty feet in diameter at the base, and from one hundred to one hundred and twenty feet high. With a well appointed system of sawdust and slab carriers, the premises about a saw mill may be kept as neat as around a woollen factory. All the leading mills are getting them.

THE ONTARIO TIMBER SALE.

As our readers will have noticed, by an advertisement which appears in another column, the Ontario Government will offer for sale by auction, at Toronto, on the 6th of December next, Timber Limits covering a very large area of territory in the Muskoka and Parry Sound districts.

Although we imagine that intending buyers at this sale will take steps to ascertain for themselves the character of the timber on these limits, and the facilities afforded by nature for getting it to market, yet it may not be out of place for us to give a brief epitome of the reports of the surveyors who laid out these townships, with regard to the timber growing upon them.

MOWAT.—This township was surveyed in 1879 by Mr. T. Byrne, who reports that all that portion of it lying south of concession line 10 and 11, and north between side line 30 and 31, and the west boundary to French River, as burnt country, and that the only pine of any consequence in the township is to be found on both sides of the Pickerel River, extending about a mile inland.

BLAIR.—This township was surveyed in 1878 by Mr. T. Byrne, who reports that about 11,000 acres in the south-west corner had been burnt over about fifteen years before, and had grown up with small poplar, white birch, balsam, spruce and scrub pine. About 21,000 acres lying south of con. line 10 and 11 to Kawigamog Lake, and west to lot 23, and all that part from the 8th con. north to Pickerel River, and west of side line 20 and 21, is heavily timbered with black birch, pine, maple, hemlock, spruce, elm, white oak, ash and tamarack, while all the rest of this township had been burnt over about three years before, leaving not a vestige of timber.

MCCONKEY.—Was surveyed in 1858 by Mr. D. Beatty, who reports that from the south boundary northward to a narrow belt along Wolf River it is timbered with maple, birch, basswood, and in some places hemlock, with scattering pine, broken with small swamps of cedar and tamarack, while immediately along Wolf River, on either side, the country is broken with ridges of rock and timbered with hardwood and pine of good quality. Along the river from about lots 20 and 21 to its outlet the pine has been cut off. Eastward from lots 20 and 21, and northward from the river, the timber is hardwood and pine,—in many places of superior quality.

LAURIER.—Was surveyed in 1878 by Mr. Henry Lillie, who describes the township as hilly, many of the hills reaching the height of from two to three hundred feet, while the timber is principally mixed with hardwood, balsam, spruce and pine, but not a sufficient quantity of the latter for lumbering purposes. There is a burnt district of about 5,000 acres in the S. E. corner.

JOLY.—Was surveyed in 1878 by Mr. T. O. Bolger. The principal streams in this township are the Magnetawan and South River. The only pine of any consequence is found along the flats of the Magnetawan, throughout the township. There is also good pine in the vicinity of the South River. Away from these streams the country is hilly and chiefly covered with hardwood.

PATTERSON.—Surveyed by Mr. J. W. Fitzgerald in 1876, who says that the swamp timber is chiefly spruce, while the uplands are covered with maple, birch, and pine, and that a rather extensive area of the north part of the township has been burnt over, and the timber rendered comparatively useless.

SINCLAIR.—Surveyed in 1876 by Mr. John McAree, who says that in different parts of the East River Valley there is a considerable amount of very good pine, of moderate size. Isolated pine trees also occur among the other timber, which consists of maple, black birch, hemlock, beech, balsam, basswood, cedar, &c.

GURD.—Was surveyed by Mr. J. W. Fitzgerald, who writes that there are only occasional pines with an enormous quantity of magnificent black birch, with trunks three and four feet thick, with a height of thirty and forty feet, and which is of fine quality and color.

MACHAR.—Surveyed in 1876 by Mr. E. Stewart, who says the whole township is well timbered,—the swamps with spruce, cedar and tamarack; the swampy land with hemlock and birch, with pine ridges, and on the higher land with maple, birch and balsam.

STRONG.—Surveyed by Mr. W. Beatty in 1876. About one-ninth of the area of this township is occupied by a lake lying near the centre. A belt of hardwood land along the west side of the lake gradually rises to about the height of one hundred feet, when it becomes mixed with scattered pine and hemlock, with occasional patches of birch and balsam. East and north of the lake the land is rolling and covered with hardwood and scattered pines, and small patches of balsam and spruce swamp.

PRINGLE.—Surveyed in 1876 by Mr. Fitzgerald, who states that the south-west portion may be described as rugged and broken, scattered over with a sprinkling of white pine of fair quality, but not in sufficient quantities to be called a pine country. The south-east part of the township is described as of better quality, covered with scattered pine of good size, large birch, and a fair growth of maple, hemlock, beech, &c.

LOUNT.—Surveyed by Mr. Hermon in 1876. The timber consists of maple, beech, birch, balsam, spruce, pine, &c. The pine about the Lake of Many Islands is said to be of value, and may be got out *via* Deep Water River and the Maganetawan.

HIMSWORTH.—Surveyed in 1876 by Mr. Chapman, who reports the northern portion of the township as having been formerly run over with fire, and much valuable timber destroyed, a small quantity of green pine in some places being all that is left. The remainder is timbered with maple, birch, oak, basswood, &c., on the high ground, with cedar, pine, balsam, and spruce along the valleys and streams running into South River.

BETHUNE.—Surveyed in 1877 by Mr. A. B. Scott, who says there is not much pine in this township, and that it is doubtful if there is sufficient to cause it to be set apart for lumbering.

PROUDFOOT.—Surveyed by Mr. C. F. Chapman in 1877. The timber is reported to consist principally of hardwood, maple, beech and birch, on the high lands, while on the lower levels these are mixed with cedar, hemlock, balsam and pine. Pine does not occur in large groves, but generally scattered through the other timber, the best localities being along Loon Lake, and the stream running from it at the head of Island Lake, and along the main (South Branch) river eastward. A grove of small pine occur at the north end of Sand Lake, but of no great extent.

MILLS.—Surveyed in 1877 by Mr. T. Byrne, who says the southern portion of this township contains some of the finest pine he had yet seen in the Huron and Ottawa territory. He considers this part of the township principally adapted for lumbering purposes. The northerly part has also some very good pine, though not sufficient for lumbering purposes.

HARDY.—Surveyed by Mr. Bray in 1877, who says on the whole the township cannot be called a good pine township, although much valuable pine exists in it. There is a great deal of cedar scattered all over the township, which, though large, is generally faulty and hollow-hearted.

NIPISSING.—Mr. H. Lillie, who surveyed this township, says that on the whole it is well timbered. In the central and westerly portions there are large tracts of fine hardwood, consisting of maple, birch, beech, and ironwood, with a mixture of basswood and hemlock. The maple is said to be of good size, and among it are many beautiful specimens of birds-eye, while the birch is frequently three and four feet in diameter.

ALMOST YOUNG AGAIN.—My mother was afflicted a long time with neuralgia and a dull, heavy inactive condition of the whole system; headache, nervous prostration, and was almost helpless. No physicians or medicines did her any good. Three months ago she began to use Hop Bitters, with such good effect that she seems and feels young again, although over 70 years old. We think there is no other medicine fit to use in the family. A lady in Providence, R. I.—*Journal.*

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4L25 THOMPSON SMITH.

Department of Crown Lands,

TORONTO, 6TH OCTOBER, 1881.

NOTICE IS HEREBY GIVEN THAT, UNDER AN ORDER IN COUNCIL,

TIMBER BERTHS

In the undermentioned Townships in the

MUSKOKA and PARRY SOUND DISTRICTS,

Will be offered for Sale by Public Auction at the Department of Crown Lands at twelve o'clock noon,

On TUESDAY, the 6th day of December next,

viz. :—Townships of Mowat, Blair, McConkey, Hardy, Patterson, Mills, Sinclair, Bethune, Proudfoot, Gurd, Machar, Strong, Joly, Laurier, Pringle, Lount, Nipissing and Himsworth.

The area to be disposed of in the above Townships as Timber Berths is upwards of 1,400 square miles, and to suit all classes of purchasers each Township will, as nearly as practicable, be divided into four berths.

Sheets containing conditions and terms of Sale, with information as to Area and Lots and Concessions comprised in each Berth, will be furnished on application personally or by letter, to the woods and forests branch of the Department, or to the Crown Timber Offices at Ottawa, Belleville and Quebec, and the Office of T. E. Johnston, Esq., Parry Sound.

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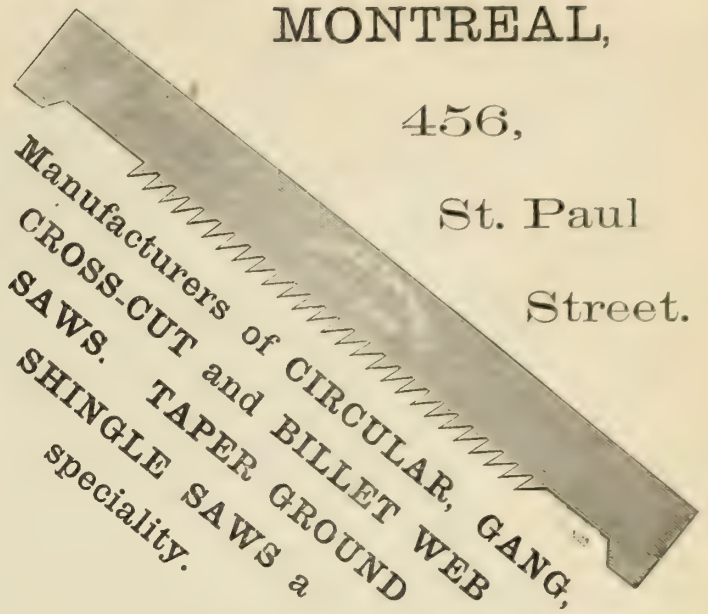

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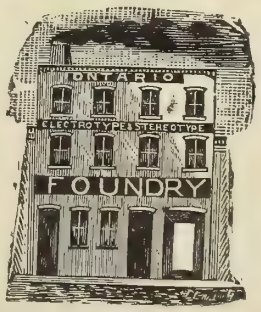

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FOREST TREE CULTURE.

BY HON. H. G. JOLY.

The following valuable article appears in the last report of the Montreal Horticultural Society and Fruit Growers' Association of the Province of Quebec :—

The European traveller who visits only the settled parts of this Province, is invariably disappointed at the scarcity and meanness of our trees. Of course, if he leaves the beaten tracks of travellers, and goes far enough into the wilderness, up the Ottawa and the St. Maurice, he will see fine timber, but, in our settlements, we can only show him, here and there, at long intervals, one solitary elm, model of grace and beauty, and the traveller will feel, as we do, grateful to the man who spared that tree.

On a warm summer's day, the Desert of Sahara, with its lovely oasis, would be suggestive of coolness, compared with our country. No trees to shade the dusty roads, to shelter the panting cattle, to set off the neat white-washed houses; only far away, hidden nearly out of sight, the patch of small neglected timber which the farmer is compelled by our stern winters, to spare from the general slaughter, as he will die, without fuel.

If every acre of ground were covered with valuable crops, one would try and get reconciled to the absence of trees, and bow to the iron rule of our age which converts everything into cash. But what a small proportion of all that ground is used profitably! We can find plenty of spare room for growing forest trees; they are not only the most beautiful ornaments to a country, and the most useful product of nature, giving fuel, timber, shade, shelter, retaining moisture and a protection against droughts, &c., &c., but, considering the question from a *strictly money-making* point of view, the culture of forest trees is perhaps the *best and safest investment* that can be made.

It is rather difficult, I admit, to induce people to plant forest trees in this Province, where, for generations, they have been brought up to look upon the forest tree as their natural enemy, to be got rid of at any cost, hacked down, burnt out of the way (for want of a better mode of disposing of it), and still troubling the settler for years with its everlasting stump, an obstacle to thorough cultivation. The children and grandchildren of the settlers remember too well; they cannot be expected to love the forest tree, but self-interest ought to conquer instinct and prejudice. With us, land is not too valuable for forest tree culture. In Europe, where land is scarcer and more valuable than it is here, they plant, every year, thousands and thousands of acres in forest trees.

To those who say that our country is *too new*, to think of that, I will answer that New Zealand, the Australian Colonies, India (so far as the settlement of the land by Europeans is concerned), are newer countries than ours, and they are all taking active steps towards the planting of forest trees on a large scale. In the United States, the Federal as well as the States' Governments encourage the culture of forest trees by grants of land, and money, and exemption from taxation, and powerful societies are co-operating with energy and liberality. The Government of Canada has begun by offering free grants to those who undertake the planting of a certain number of trees on the Western prairies, but I will here observe that it will require more active measures to set the people in motion, and especially the establishment of nurseries, where the people can buy young trees and seed, and the beginning of some large plantations, as an example, to show to the people, by practical results, that the culture of forest trees is within the reach of every one.

We seen in the papers that the Western railways have started the culture of trees on their own account; the St. Paul, Minneapolis and Manitoba railway is reported as having appointed a superintendent of tree culture, who has just contracted for three hundred thousand trees, and most of the roads west of the Mississippi and Missouri rivers have also begun to raise trees, in order to insure a supply of ties, and for other purposes.

How many give as their reason for not planting forest trees, that they will not live long enough to get any profit out of them. You do not hear that in Europe. Are people more selfish in America than they are in Europe? Or is the feeling of self-reliance so much more developed in America that the people here expect the next generation to take care of itself as they take care of themselves? Then leave them some timber, if you wish them to have the same chance that you had. It was but a heathen who wrote, more than eight hundred years ago, "*Arbores serit diligens agricola quorum fructus numquam videbit.*" "The good husbandman plants trees whose fruits he shall never see." But I must not drift away from my subject into philosophical considerations; it will be more to the point to show that the profits of forest tree culture are not only enormous, but that their realization is far from being delayed to an indefinite future.

I do not pretend that the whole of our farms should be planted in forest trees; that would be too absurd. Our farms are generally too large for the small number of hands we employ; there are always some odd corners, idle strips, stoney or damp patches which it does not pay to cultivate; begin and plant forest trees there, suiting the tree to the nature of the soil—you will find some for every kind of soil. Once planted and fairly started, they will take care of themselves, give no trouble and increase yearly in value, in a wonderful ratio, so well expressed by the Honorable F. B. Hough, chief of the Forestry Division of the United States Agricultural Department, in the address lately delivered by him at Columbus, Ohio.

For years past, I have sought the best and cheapest mode of re-wooding our denuded lands, and have made some experiments; they have not yet been carried over a great many years, and are, so far, most encouraging notwithstanding my numerous mistakes and enforced absence at the best seasons, and they satify me as to the correctness of the statements made by the leading advocates of forest tree culture. I trust not to be charged with egotism if I now give the results of some of those personal experiments, rather than copy or condense what has been written by others, and it will be a great satisfaction if I can induce a few to try for themselves.

In selecting forest trees for planting, the first consideration ought to be the nature of the soil where they are to be planted; if the soil is not favorable to one kind of tree, do not waste your time in planting it there; you will find another tree that will suit the soil. After paying all due deference to soil and climate, you must be guided in your selection of a particular kind of tree :—1st. By the value of the timber. 2nd. The greater or lesser ease and certainty with which the tree can be grown. 3rd. The rate of growth.

I have tried principally black walnut, oak, elm, maple, ash, tamarack, Russian pine, and poplar, and will now give some of the results :—

Black Walnut.—The value of that wood is so considerable (a dollar a cubic foot at the present time), and it is getting so scarce that it struck me as the most worthy of being introduced and cultivated here. True it did not grow spontaneously anywhere in the Province of Quebec, but this appeared to me no conclusive reason why it should not grow and flourish here. The lilac comes all the way from Persia, and it spreads out its leaves earlier and keeps them unchanged later than our typical tree, the maple. I did not fear our great colds, for in the West, the natural home of the black walnut, the thermometer often ranges as low as here, though for a shorter period at a time. It was well worth trying.

I procured a bag of black walnut nuts from the West in the fall of 1874, and sowed them at once; it was late in November; we had to remove the snow and break the frozen ground, but I thought the earth the safest place for to winter them. They began to come up about the tenth of June following; not five per cent. failed, and they have never been artificially sheltered in any way. It would not be worth while introducing them here if they could not take care of themselves.

Of those left undisturbed where they were sown, I have not lost one; they have now had six summers' growth. I have just had some of them measured, so as to be certain of their size; the height of the four largest is as follows :—Fifteen feet and a half, fourteen feet and a half, fourteen feet, and twelve feet, and thick in proportion. Those have not been transplanted; now notice the difference between them and those that have been moved.

In the fall of 1875, when they were only one year old, one lot were transplanted, but the soil was not favorable and they have not done well, so far; however, they are beginning to recover. In the spring of 1876 I transplanted another lot; the best are about eight feet high; and another lot last spring, the tallest of which are about ten or eleven feet. All those trees are the same age as the fifteen and fourteen feet trees; the difference in size results from the transplanting, therefore it is much better to sow them at once where they are to remain. Plant them thick, as the wood of the young tree is very soft, like that of our native butternut.

It is contrary to all preconceived ideas, even among those who handle timber every day, but nevertheless true, that the black walnut (*juglans nigra*) and the Canadian oak (*quercus alba*) as a rule increase much more rapidly in girth than our pine and white spruce. I conclude, from counting the rings on the trees after they are cut down, and from watching the growth of the living trees, that black walnut and Canadian oak generally gain one inch in diameter in about three years and a half, while our spruce and pine take about double that time to accomplish the same result; this can easily be ascertained by counting and measuring the rings. Of course there will be exceptions, and it would not be fair to judge by those only; I speak of the aver age.

It is now time to say something of the profits, and I must be careful to avoid exaggeration. Judging by the growth of the living trees and the rings of the timber, when cut, I do not hesitate to say that a black walnut, under ordinary circumstances, at the age of seventy-five years, will have attained twenty-one inches in diameter and will contain at least fifty cubic feet of timber, the actual value of which is about one dollar per cubic foot. (See for prices the *Lumberman's Gazette*, published at Bay City, Michigan, the numbers of the 26th January, 2nd February, and 2nd March, of this year).

For how many such trees, judiciously planted, will there be comfortable room on one superficial acre? It is difficult to find a regular plantation of any trees of that diameter here, to help us to a solution of the question, and the way in which trees are scattered in the forest and their irregular size leave but a vague impression on the mind, varying according to the personal experience of each. I am not ready to answer the question at present for want of full information, and will not venture a guess, but I do not feel the same hesitation where trees standing in one single row, with plenty of room on two sides, are concerned; in that case, trees twenty-one inches in diameter would not be too close standing at eighteen feet from one another. Take a farm three acres wide, with a road across the width and a row of black walnuts of an average diameter of twenty-one inches on each side of the road, the trees eighteen feet distant from one another, you get sixty trees containing fifty cubic feet each, three thousand cubic feet, worth, at the present price, three thousand dollars.

But it will be safer to sow the black walnuts in clumps, pretty close. They will protect one another when young, and, as they grow, they can be thinned gradually. Their culture will entail little trouble, apart from the preparation of the soil, and the sowing of the nut; the work of thinning will soon repay itself with the timber removed. The better the soil, the quicker the growth. Such a valuable tree as the black walnut deserves to be well treated. If possible, find some shelter against the strongest prevailing winds for the young plantation, a belt of older trees, or a hill. They are rather soft, like our butternut; it is the only drawback I have found out so far, but not fatal. Even the youngest trees will get several branches torn off and very ugly wounds without dying; they are wonderfully hardy.

The value of these plantations will increase steadily from the day they have taken root; they represent an ever-increasing marketable value long before the expiration of that period of seventy-five years which I have indicated—not as the limit of their growth; they will grow for centuries, but—as the period necessary to attain a profitable size, when they can be cut down without waste.

The Butternut grows spontaneously here; its beautiful timber can be worked with as much ease as the softest pine; it ranks immediately after the black walnut, and is inferior to it only in the colour of the wood, which is lighter. Rubbed with linseed oil, it takes the soft, rich hue of sandal wood, and if judiciously sawn, shows wonderful marks. I recommend strongly its culture, and will be glad to send nuts to those who will plant them, next fall, as we gather a large crop of them.

White Oak.—The acorn ought to be sown as soon as possible after it drops, in the fall, as it loses its vitality rapidly, and to avoid the great check resulting from transplanting, it ought to be sown at once, if possible, where the tree is destined to remain. Its wood is tougher, and not so liable to break when young. I think it ought to grow with at least as much ease and rapidity as the black walnut; ours are rather behind, as they have been transplanted twice. The oak is so useful and valuable, and its culture so easy, that every plantation of trees ought to contain a good proportion of oak, provided the soil be not too poor for it.

White Elm.—This splendid tree recomemnds itself sufficiently by its beauty and usefulness to dispense me from dwelling at any length upon it; it grows rapidly in a deep, damp soil. I have not grown it from seed, but by taking up young trees from a low island, where they grow in abundance. It appears to bear transplanting better than the oak, walnut or maple, and can be moved safely of a much larger size than any of those trees.

Maple.—If you wish to raise a maple sugary with the smallest amount of expense and trouble, go to an old maple grove in the fall; the ground is covered with a thick carpet of seedlings. After rain you can pull them up by hand with the greatest ease, without breaking any of their small roots, if you are moderately careful. Plant them at once in a corner of your garden, about two feet apart each way; weed during the first two summers with a light hoe. We found, after four years, the trees fit for transplanting, about five feet high, and the thickness of a man's thumb. As the ground was mellow and free, we took them up with little damage. Of course, there is still the objection of transplanting, but in a less degree than when you seek your maples in the woods, where their roots are mixed up with those of other trees, stumps and stones, and must be more or less torn up with violence. There is an immense difference in the comparative cost of the two processes, which will tell upon the hundreds of trees required to make a sugary worth working. Those small trees never fail (at all events those we transplanted never did), while much larger trees, more injured in the removing from the forest, die in great numbers, and the survivors are seriously checked. I have been told that the seedlings would overtake them, but have not yet had time to verify that statement. Maples will begin to yield a reasonable quantity of sap for sugar when about twenty to twenty-five years old.

The Ash.—It is well known, and its different varieties are found very useful, especially the white ash, which recommends itself for its elasticity; its wood is beautifully marked, and is largely employed in the making of furniture, panels, &c. It will thrive where the walnut, oak and maple refuse to grow, or only linger miserably. I remember part of a maple avenue, where, year after year, the maples had been replaced over and over, and failed; at last, we had recourse to white and black ash; none failed, and they are progressing most satisfactorily.

Tamarack will grow in wet, damp ground; we have succeeded with them where even willows had failed; the value of its timber and knees is too well known to require any comment from me.

Russian Pine (*Pinus Sylvestris*).—In making new plantations, especially from seed, it is no more trouble to try foreign than Canadian seed, and, however strange it may appear, I find it easier to procure the seed of the Russian and the Himalaya than of the Canadian Pine. One

may find among foreign trees valuable additions to our plantations; such as, I think, the Russian pine, native of the north of Russia. Our climate suits it admirably, and it appears a more vigorous grower than our Canadian White Pine. I cannot give any opinion as to the quality of the timber, as they have only been sown in the spring of 1873. They started rather slowly, and their height and thickness are less than those of the black walnuts sown two summers later, in November, 1874; but they are now beginning to make more rapid strides. I measured the season's growth of one of them last year, on the 3rd day of July. It showed twenty-six inches in length, gained in about thirty days, as the buds of the coniferæ do not open much before the beginning of June; the year's growth was already over, and from that moment it only thickened and hardened into wood.

Since the growing season of our trees is so short, we ought to lose no time if we wish to help them along, by thinning, removing useless branches, mellowing the ground, or otherwise; all that ought to be done before June, so as to afford them every chance during the growing month. I think the *Abies Nobilis*, or White Fir, of Washington Territory, is the fastest grower among the Coniferæ.

POPLAR.—I must beg the indulgent reader to listen to my plea in favor of this tree, and not condemn it unheard. I speak of the kind known as Cotton Wood or Populus Canadensis (not to be confounded with the Balsam Poplar and the Aspen). Its growth is wonderfully rapid; twenty-three years ago, in November, 1858, I stuck in the ground three cuttings; it was my first trial at tree culture. They are now over sixty feet high, one is twenty-five inches in diameter, the second twenty-four inches, and the third twenty-two inches, an average of one inch a year in diameter. In every new plantation, in a country completely denuded of forest trees, and especially in re-wooding our Western prairies, I would recommend, at the start, a plentiful use of this Poplar, without neglecting, of course, more valuable trees. It strikes at once from cuttings, which can be procured and transported anywhere with the greatest ease. Thanks to its rapid growth, it will soon enliven the scenery (as it is a handsome tree), afford shade, shelter the other trees in the plantation and supply timber, not of the first quality, but better than none, until the slower growing trees are ready with their more valuable contributions, and it can easily be cut down when the room it occupies is wanted for better trees. This poplar has been introduced from Canada into France, where it is designated as the "Peuplier du Canada," and considered as a useful and profitable tree.

I must now close this long article. The results of my experiments are nothing to boast of; practical men would have done much better. If I had chosen the soil for the different kinds of trees more judiciously, had not left them much too long without thinning them, and been able to attend to them in the proper seasons, I am convinced that, as a whole, they would be much finer. At all events, it shows that any one who will take the trouble, can begin the culture of forest trees without previous training. I do not speak of orchards here. Having no School of Forestry in Canada, we must educate ourselves; we have got books written on the subject by eminent and practical men, and we have got, always opened before our eyes, the great book of Nature.

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GRINDLEY vs. RYAN.

At the last sitting of the Court of Assize, held at Ottawa, an action for damages was brought by Mr. Grindley against Mr. Ryan, for trespassing on the limits of the plaintiff on the Montreal river. The trial extended over several days, the chief, indeed the only, question at issue being the value of the timber taken, inasmuch as it was admitted by the plaintiff that the trespass was unintentional.

After a careful review of the evidence Justice Wilson submitted the following questions for the consideration of the jury in coming to a conclusion as to what damages the plaintiff in the case was entitled to, if any:—

1. What was the quantity of timber taken estimated at as standard logs; plaintiff says 5,250, defendant 4,450?

2. How should that number of standards be classed? That is, should they be classed as logs or as square timber, or partly as logs and partly as square timber?

3. If partly as logs and partly as square timber, what proportion do you consider to have been fit for square timber? The defendant said 55 per cent., that is 11 trees out of every 20.

4. If you find any part of it fitted for square timber, what was the Quebec price of it in 1880? The witnesses have varied from 24c. a foot to 31c. a foot.

5. What do you allow for the cost of the manufacture of square timber on the Montreal River, and getting it to Quebec from there (not noticing for the present the bad shoots and rapids, and the bad place known as the notch)? Mr. Grant said it cost from 13½c. a foot to take it from the Kippewa to Quebec. Mr. Bryson said 15c. and Mr. Nagle said 17c. to take it from Lake Temiscamingue to Quebec.

6. Was there any extra expense manufacturing on the Montreal River by reason of the difficulty of getting men and provisions to the limits? Do you think the convenience of haul would make up for that?

7. Would there be any extra expense in getting square timber down the Montreal River by reason of the shoots and rapids and of the notch? If so, how much? What I mean is, by the breakage and by damage done to the corners of the sticks, and causing loss of measurement, as it is said always happens, and by any extra delay of the men? What percentage?

8. What do you value the saw logs at by the standard?

9. What would be the cost of manufacture and driving the logs?

10. What do you allow the plaintiff (if any thing) for waste of trees cut and left lying on the limits by the defendant?

11. The plaintiff's survey cost him $800. Do you allow it or any part of it to him?

His Lordship also impressed on the jury that the trespass was not a wanton one, but inadvertant, and that no extravagant damages should be given.

The jury returned the following answers to the questions which had been submitted for their consideration by the Bench:—

1. We take the defendant's statement to be correct.

2. Partly as logs and partly as square timber.

3. We consider 55 per cent. to have been fit for square timber.

4. Twenty-seven cents a foot.

5. We say it is worth seventeen cents per foot to manufacture the timber and take it to Quebec.

6. We think the short haul would make up for the difficulty of getting in men and provisions.

7. About 10 per cent.

8. One dollar and fifty cents.

9. Eight cents per standard.

10. Two hundred dollars.

11. Allow him two hundred dollars.

THE VERDICT.

The result of these answers having been considered by the Bench, the total amounts involved in them were computed, and a verdict for the plaintiff was given for $5,746.

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One copy, six months, in advance	1 00

Advertising Rates :

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Communications intended for insertion in the CANADA LUMBERMAN, must be accompanied by the name of the writer, not necessarily for publication, but as a guarantee of good faith. Communications to insure insertion (if accepted) in the following number, should be in the hands of the publishers a week before the date of the next issue.

PETERBOROUGH, Ont. NOV. 15, 1881.

ABOUT ten o'clock on the night of the 4th inst. the sash and door factory of Messrs. Christie & Co., St. John, were destroyed by fire. Loss, about $15,000.

THE *Lumberman's Gazette* believes that there will be a full supply of logs for next season, even if the winter should prove unfavorable for operations, inasmuch as there is a large number of logs to be carried over.

A HOLLOW tree in South California has been converted into a dwelling. Doors and windows have been put in, and floors built for four stories, the entrance being made by means of a ladder. Outside the topmost room is a small balcony, shaded by the foliage of the tree. The occupant expects to get rich by having no plumber bills to pay.

THE following is a comparative statement of the exports of lumber, &c., from Port Hope, to to the 1st of November, for this year, and also for the corresponding period of 1880 :—

	1880.	1881.
Lumber, feet	66,471,033	69,607,346
Lath and Shingles	32,540,850	33,967,900

BRITISH TRADE NOTES.

THE disposition on the part of owners just now is rather to hold than press goods on the market, in the full belief that the market will be much firmer before the end of April or May. It is the general impression now that the supply coming forward will hardly be sufficient to keep the market from touching much higher prices. Even extravagant figures are possible between now and the spring.

WE noticed at a sale some fresh-sawn oak planks from Montreal, submitted in 3, 4, and 5 in. thicknesses, at a uniform price of 3s. per foot cube. These goods are somewhat uncommon in the market. We have often wondered, with the extensive sawing facilities at the shipping places, that hardwoods have not come to this market from the various ports ready manufactured. That a trade of the kind will eventually be developed we have not the least doubt. The parcel alluded to did not sell, the demand just now for hardwood being very quiet.

AT Hull, though the importation has been brisk, there is a considerable shortage on the whole as compared with last year, and prices are reported firm with a rising tendency.

THE importation during the past week into Liverpool has been much more lively than hitherto, owing to the sudden change of wind, which has brought into port a large number of vessels that for some time past have been detained off the coast by the long continuance of easterly winds. Most of these vessels have now got to work discharging their cargoes, and the quays are now wearing a busier aspect than they have done for some time past ; at the same time there are visible many large spaces either unoccupied entirely or but sparsely filled. The recent import has not affected the market in any way, for a large proportion of the cargoes recently arrived have come upon contracts entered into some considerable time since ; hence there are not many cargoes in the market unsold, and those are being realized at about late rates. In cases where prices asked cannot readily be obtained the cargoes are being stored to await a better market.—*Timber Trades Journal, Oct. 22.*

THE AUTUMNAL TRADE.

When three-fourths of the year are fairly gone by, and about two-thirds of the import season, the trade ought to be in a position to judge pretty nearly what its status will be when the stocks expected are all come forward. or shut in by the ice, and further shipments for this year at an end.

But the season has been so exceptional that there is still great diversity of opinion as to the ruling of prices. If the last season was abnormal, so is this, but in a different sense. Then, with plenty of wood ready for shipment abroad, prices were run up by persuading importers there was going to be a scarcity. This year prices, which had been proportionately low all last year, on account of the abundant supply, rose on this side, because no shipments could be made of any importance from the Baltic ports until the spring had nearly gone by. Then came an apprehension of great pressure on our markets from the north of Europe, and prices began to droop again. Finally freights ran up 30 and 40 per cent., and while charterers were hesitating importation received a check, because buyers would not close contracts unless sellers would guarantee a ship not to exceed a certain limit of freight ; and few transactions were completed wfthout a good deal of correspondence and telegraphing, while others went off altogether because this difficulty could not be got over.

The reports of the state of the timber trade at the outports are mostly of a favorable character, and the last public sales of St. John spruce at Liverpool were the best we have noticed for some time past, and about 10s. a standard higher than they were last month, and, although business was reported quiet, prices are said to be firm, with no likelihood of abatement. Prices at Glasgow are scarcely so good for spruce and pine deals as they were twelve months ago, and 1s. 4d. per foot for first-class hewn pitch pine of 75 ft. average per piece is not an indication that the demand in the Clyde is likely to exceed the supply. There is a great quantity of timber used up in Glasgow for its iron shipbuilding fittings. It has been estimated that an iron ship of 1,000 tons register will use up about 400 loads of wood in masts, spars, bulwarks, decks, and interior fittings before she proceeds to sea ; but as the market is generally well supplied in proportion to its prices, these keep a pretty fair level.

Upon the whole the prospects of the trade may be considered more hopeful than they have been for several seasons past ; but it would be wrong to conclude the import season to be very near its end. That will depend on the weather of the next two months. No doubt the late gales have checked the importation and sent back many ships disabled, which will perhaps not come forward with cargoes this side of Christmas, and many more will take warning and lie by ; but these things nevertheless, a goodly number of ships are likely to bring forward their cargoes, as may be gathered from the information herein referred to, and those who stand out too stiffly for price while the market is good may find it difficult to do as well when the time comes for them to want the return of their money.—*Timber Trades Journal.*

THE WHITE PINE.

ORIGIN OF PINE FORESTS—REPRODUCTION—INSECTIVOROUS ENEMIES—THE BLACK KNOT—WIND SHAKES—PITCH.

William Hosea Ballou, of Evanston, read a paper before the American Association for the Advancement of Science, at Cincinnati, August 19, as follows :—

DENUDATION.

Forty-six years ago the pine industry of Michigan had its origin on the Saginaw river. From that date to the present the denudation of timber has increased in that state, and other pine areas, to such an extent that within the next decade the use of such material as a commercial pursuit must pass out of existence. Already the producer is beginning to look to science with genuine alarm for such aid as may be extended to avert a calamity which certainly is threatening an industry the capital invested in which would twice pay the expenses of the late war. It therefore devolves upon us to discuss, not only the enemies of the pine tree which nature herself has inaugurated, but also the statistics of the destruction by the more formidable consumer, man. In a paper relative to so extensive a subject, it seems necessary to draw a line of discussion, and to confine these remarks to the white pine as it was, and to-day stands in the state of Michigan.

ORIGIN OF THE WHITE PINE.

The first thought suggested is relative to the origin of the white pine forests. From whence came the species which so strictly confines itself to its own peculiar territory ? The oak, and most other trees, are naturally reproductive, and young trees are equally prolific in their growth on the same soil where the first forest was levelled to the ground. They may be transplanted on almost any territory, and without any special care, speedily growing to a state of usefulnesss to man. Not so with the white pine. It is now an almost undisputed fact that it will not reproduce on the parent soil, and that when transplanted elsewhere, its develop is marked with early decay in so many instances as to disparage the work. Furthermore, it is beset at once with the same host of natural enemies common to it on its indigenous ground.

For some years past my attention has been directed to some facts which may have bearing on the question under consideration. The pine of the level country east of the Rocky mountains seems to have its best growth in proximity to the lake region. I have noticed that frequently, where a lake recedes, leaving a sandy beach, evergreens, the juniper, pines, etc., are very apt to spring up. Within the memory of man, a wide sand beach near Waukegan has been made, and on this area a miniature white pine forest has appeared, and thrives. On some lone islands in Lake Erie, of evident recent formation, called the East Sister, the Old Hen, etc., I observed several years since that a similar phenomenon had occurred. These and other facts point to a recent origin of the pine forests under consideration, which might not have been in existence at the time of the landing of Columbus. This fact is more apparent when it is stated in this connection that the average age of the pine is 300 years in this country ; and the other fact is reiterated that it does not reproduce on the same soil. The present pine forests, then, doubtless took the place of some other species, which had exhausted the soil necessary to their existence, a phenomenon well known to naturalists. It matters not whether the seeds were blown there by the winds, or lay dormant in the soil until their turn, or, indeed, what the speculation concerning them is, so long as the facts are inaccessible ; certain it is the origin of the pine forests in Michigan is a matter of several centuries ago.

REPRODUCTION.

The next question of importance is reproduction. Answers to queries submitted to over one hundred practical lumbermen, as well as careful observation, makes positive the fact that the reproduction of the white pine on parent soil is impossible as a commercial success. There are reasons for this. The most important has relation to the exhaustion of that vitality of the soil necessary to this species. Other causes have been advanced to the neglect of this, which plainly do not bear on the case. Were reproduction successful—and here is the great practical proof—my one hundred informants say that long ago forests would have been started to replace those now a fact of the past.

THE ENEMIES

of the white pine are numerous. The average of the data I have gathered tends to show that pine forests began to decay before one-half of the trees were matured. The causes of such decay are the growth of punk or rot, "wind shakes," and loose knots. Insects do not originate, but hasten decay.

The punk is a rot which appears in a lump on the side of the tree, eating into its vitals. It is due to more than one cause. Opinions of writers vary on this subject, all of whom argue in behalf of a special cause. I have carefully examined all of these claims, but observations in the lumber regions, and talks with lumbermen, have convinced me that anything which affects the vitality of the tree will produce punk or rot. It matters not whether the tree becomes wind shaken, or the soil exhausts, or a knot penetrates to the heart, or what befalls it when alive, punk is sure to become the secondary condition, followed by destruction.

Enemy number two is the black knot. This is a loose knot, black in color, which, when the tree is sawed, drops out of the board, making it defective. It is caused by its imperfect growth If there is not sufficient nourishment at the roots to support the limb, it grows imperfectly, and its inner termination works toward the heart, as if to suck sap from the vitals. This brings on loose layers and subsequent decay.

A wind shake is one of the exasperating defects of lumber. It is noticeable in a board, the layers of which separate, usually in triangular form, when the sawing takes place. It occurs generally at the butt of the tree, and is caused by the force of the wind when the tree is standing, and by frost when the log rests in the yard. Opinions on the latter point vary.

OTHER AGENTS OF DESTRUCTION.

There are other enemies of the lumber, all of which deserve consideration just at this time, when commerce must begin to economize and obviate, so far as possible, all difficulties in the way of making the product supply the demand. The first of these is fire. All parties agree that from one-half to one-third of the lumber product is destroyed by this agent. Fires, where they occur, follow clearings, but often penetrate the dense forests, sometimes covering an area of a hundred square miles. It is impossible to secure any data on this subject, because more or less timber is saved out of the wreck. A pine tree that has been scorched is utilized the succeeding year, or the worms destroy it.

Insects are very destructive, the pine weevil, *Tomicus zylographus*, being a foremost agent. These attack a sound tree, but not a live one. If anyone will take the trouble to enter a great log yard at dusk, these creatures may be heard at work, the united sound of which is like the roar of wind or water. The grub goes through a log in a crooked line, which greatly depreciates the value of the timber. There is a "pin worm," the scientific name of which has escaped me, that bores its way straight to the heart, leaving a round black passage the size of a pin head. These are the only insects which lumbermen take into account in Michigan.

GET OUT OF DOORS.—The close confinement of all factory work, gives the operatives pallid faces, poor appetite, languid, miserable feelings, poor blood, inactive liver, kidney and urinary troubles, and all the physicians and medicine in the world cannot help them unless they get out of doors or use Hop Bitters, the purest and best remedy, especially for such cases, having abundance of health, sunshine and rosy cheeks in them. They cost but a trifle.—*Christian Recorder.*

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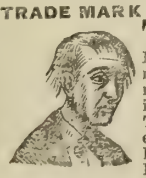

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In ordering, mention the CANADA LUMBERMAN. L241y

504 St. Paul Street, MONTREAL.

A BIG FLOUR MILL.

A recent number of the Boston *Journal of Commerce* contains an account of the mammoth flouring mill now nearly completed, in the city of Minneapolis, Minn., from which we cull the following particulars. The owners are C. A. Pillsbury & Co., who also own the five principal mills of the city :—

Some two and a half years since Mr. Pillsbury visited Europe with a view of examining the various mill buildings and processes relating to the manufacture of flour in the various milling centres. After his return a site was selected on the east side of the river, about 500 feet below the falls of St. Anthony, the plans of the building agreed upon, and the drawings made. In the spring of 1880 ground was broken and the structure commenced. It is built from Trenton limestone, rock faced, and laid in courses. The building is 1,800 feet long, 115 feet wide, and 137 feet high, having seven stories and a cupola. The side walls at the foundation are 8½ feet thick and at each end the walls are 7½ feet thick. The walls of the building proper are 5½ feet thick below the grinding floor, and taper to a thickness of 2½ feet in the three highest stories. The basement is 20 feet in height, laid in Louisville cement, and the coping, window sills, and two bolting courses are of hammered granite. The outside of the building shows for itself elegance of design which is quite appropriate for the purposes to which it is applied. The masonry of this building alone required 125 men nearly six months to finish. The driving mechanism is found on the first or basement floor. There is also a wheat bin capable of holding 35,000 bushels of wheat, extending up through the grinding floor. The Hurst frames for the millstones are on this floor, but the millstones are on the floor above. The second story is the reducing floor, and when the machinery for the mill is completed, 400 sets of roller mills will be here, arranged in twelve lines. Only half of the machinery has been placed. One hundred and one Gray's mills have been furnished. All these machines are double roller, 18 × 9 inches in size. Sixty-four corrugated machines, 27 smooth roller machines, and 10 porcelain machines. There are 115 Stevens' roller mills, and there will be twenty pairs of millstones in the whole mill which will be used on middlings. The millstones are arranged in one line against the north wall of this story, and are elegantly fitted in black walnut and ash, and are all provided with Behrus' patent high pressure millstone ventilation. There is also a weighing hopper and scales upon this floor, the hopper holding 800 bushels. There is also a line shaft, 120 feet in length, from which the power to drive the flour packers on the floor above is taken. The third room is the packing room, where, on each side of the mill, will be placed, when the second half of the mill is finished, 12 Eureka flour packers, making 24 in all. One end of this floor is partitioned off for a cleaning room, and this is driven by a separate belt. A large part of the floor is taken up with storage bins, but plenty of room is left for handling the flour after it is packed. On the fourth floor the bolting chests begin and run up to the attic. In the eastern half of the mill, the half now running, there are eight double and four single chests, which on the three floors above contain 40 reels each, and on the fourth floor above 22 reels, making 142 reels in all, each 14 feet long. Twenty-three No. 2 Smith purifiers are also upon this floor. There are also bins over the flour packers on the floor below, made out of ⅜ boiler iron six feet in diameter, extending through two stories. In the end of this story, set apart for wheat cleaning like the floor below, there are four Richmond brush machines, and two large sized Kurth-Coccle separators ; also four Niagara bran dusters. The fifth floor is a continuation of the bolting chests, also four brush machines, four separators and two centrifugal flour bolters, bran dusters, smutter, brush machines, and dust catchers.

The mill has ample facilities for receiving grain and shipping flour, which facilities are absolutely necessary when the fact is stated that 25,000 bushels of wheat will be ground every day this mill runs when all the machinery is put in. The mill is supplied with an elevator for passengers and freight, and is lighted with the Brush electric light of 32,000 candle power. The steam for heating the building is supplied by two steel boilers, placed in a fire-proof building, separate from the mill ; electric call bells are on every floor, and the mill has telephonic connection with Minneapolis, St. Paul, and Stillwater. A central stairway, built of iron, which is spiral in form, is one of the noticeable features. The interior of the mill is painted white, with red trimmings, while the roll mills, stairways and scales are painted red.

The power for this mill is one of the noticeable features, as well as one of the absolute requirements. The forebay is in the basement, is 125 feet long, 15 feet wide, built of stone, and laid in hydraulic cement. The wheel-pits are dug out of a solid ledge, and are 57 feet deep, being walled in by solid masonry. Iron flumes, 12 feet in diameter, made of ⅜ inch boiler iron, are used inside the pits. The motive power is two Victor wheels, 55 inches in diameter. The two wheels yield 2,400 horse-power, according to careful measurements, and it is said to be the largest power developed by any two wheels in the world. The water is brought to the mill by means of a canal 650 feet long, 16 feet wide, and 16 feet in depth, in solid rock. After the rock was blasted out the sides were built up with solid masonry laid in hydraulic cement and arched over with stone. The bulkhead is 30 feet wide, 30 feet high, and in it are two gates, one on each side of a central pier. A stone arch beneath the basement admits the water into the mill. The discharge from the wheels is through two tunnels, each 150 feet in length, running from the river to the mill directly under the wheels. The tunnels empty into a tail-race several hundred feet long, which empties into the river. Upon the top of each water-wheel shaft is a bevel gear which transmits the power to a horizontal shaft eight inches in diameter, 145 feet long, tapering to six inches at the end, which rests on a solid archwork of masonry inside the forebay. On this line of shaft are the driving pulleys, weighing each six and one-half tons, and upon which run two 48-inch belts, each 26 feet long and double. From the line of shaft the power is taken off by thirty-inch belts, to drive the various machines of the mill. The arrangement is such that if one wheel should break the other can run the mill, and the power of both wheels can be used together on each or both sides.

One-half of this mill is now built, and is considered capable of turning out 2,500 barrels of flour per day ; but it has made, by actual record, 3,547 barrels in one day. The mill, when completed, will have a capacity of 5,000 barrels per day, making, it is claimed, the largest flour mill in the world. The amount of power yielded by the two mills in question is something which can hardly be measured, by the mind, at least ; and that a water-wheel, 55 inches in diameter, should be enabled to transmit 1,200 horse-power, is applying a large amount of power, which, in this case, seems to be thoroughly utilized. We have never before heard of a water wheel transmitting 1,200 horse-power, let alone two working in the same pit actually yielding, or ready to yield, 2,400 horse-power.

Some conception of the capacity of this mill may be had when it is stated that 125 cars are required daily to take the total production of the mill away, and sometimes 200 cars arriving and departing to do the business of this mill.

Dangers of the Electric Light.

It is reported that the disastrous fire at the Landenberger Mill, Philadelphia, on Wednesday night, had its origin, as the local journals express it, in the "unaccountable flickerings and sparks from the electric lights used in the establishment." If these statements be correct, it becomes a matter of no inconsiderable importance to ascertain from the scientists how far these eccentricities are likely to be permanent conditions of the use of these lights in other establishments. It is a serious business thus to have life and property at the mercy of their scintillations.—*Philadelphia Bulletin.*

There is more or less danger of the falling of sparks from all electric lights. Any imperfection in the carbon or irregularity in the driving engine will produce snappping and sparking. A simple safeguard is to place a glass cup around or under the carbon to catch the sparks.—*Scientific American.*

OFF FOR THE WOODS.

Probably at a thousand towns there are men now waiting for transportation to the camps, or hanging around looking for jobs. They are not burdened with Saratoga trunks, and few of them have even white shirts. Their days are merry ones, when they are sojourning in places of civilization, and after they shall have all departed the saloon keeper will detect a material decrease in his receipts. It would be strange if at some places special policemen have not been appointed to hold in check the strangers who are stopping among them. It would be somewhat out of the natural order of events if some of these strangers have not slept in the calaboose over night, and perhaps occasionally one of them has asked a citizen for a little money to enable him to pay his board bill for a day or two longer or until he can find work. These favors, however, are never asked as a gift, but are accompanied by a promise that the money will be returned immediately after the first pay day, and it might be possible to find better dressed, and more polished men who would not remember their debts as well.

We do not infer by this description that these loggers are really bad men. Many a good man has worn a woollen shirt, and been able to carry his entire wardrobe in a big handkerchief. Noble-hearted fellows, many of them are, who would share their last dollar with a companion disabled by a falling tree, or prostrated by sickness in camp, and the hat that is passed among them for a suffering comrade would often make the contribution plate, that circles around many an elegant church for the cause of charity, look mighty sick. The men in the woods will swear at one another, fight often, and are always ready to beat his fellow workman out of his last cent at poker, but when it comes to helping the unfortunate, their hearts are in the right place.

The majority of the men who go into the pineries do not leave behind them pleasant homes. In fact, many of them are homeless, and, virtually, wanderers—in the mills in summer, on the drives in the spring, and in the woods in the winter. They float from Maine to Canada, and from Canada to the Northwest, ready at any season to travel in any direction where inclination or a promise of increased pay may lead them. They can wield an axe, "yank" a saw, flourish an ox-gad, or hold a pair of reins, and feel that these qualifications will earn them a living anywhere in the lumber regions. Their stock in trade is easily carried, and they tramp, tramp, but always with an object in view.

The dangers of a camp are many. The giants of the forest will crush many a man the coming winter under their heavy bodies and spreading wings, as they go down before the axe that year after year is cutting them away. The treacherous binder will sweep scores of drivers from their loads into eternity, and often, when loading and unloading, a log will roll over the man or men in its way, breaking limbs or destroying life. The axe will go amiss, and, instead of being imbedded in the wood, will strike some poor fellow standing in its course. The men are subjected to these dangers, and others as well. The wages they obtain would be little inducement for others than habitual woodsmen to chance the risk, but they go into the woods in a mood that tells little of a thought that before the season shall end some of them, maimed, will, with blankets thrown over them, be carried to the nearest hospital, and the bodies of others drawn on ox sleds to the nearest settlement, and thence forwarded to their friends, or buried in graves that will never be wept over, or even sought. They probably think little of this phase of the life they are entering upon afresh, and it is just as well that they do not.

These men possess an enviable virtue—the virtue of good health. No weak-chested consumptive, no one deliberated by any diseaes can be included in the great army. Every member of it must be performed. If he does not, nothing is surer than the law regulating the survival of the fittest will force him to abandon his position to be filled by someone else. They must be men who can eat pork and beans and molasses, who can get along without butter and other delicacies of the table, and who can work in the snow, sleet and cold from daylight until dark for six days in the week, month after month. The business in which a logger is engaged calls for more endurance than that of a soldier, for in addition to exposure, the logger is called upon to do severe manual labour. During the civil war many of the most enduring men in the army, and as brave as ever faced a gun, came from the pineries of the three great lumber states.

It need not be supposed that because of the hard work in the woods, and a lack of so many of those privileges which are commonly supposed to make up civilized life, the loggers go dreadingly to their tasks. They gravitate to the forest as naturally as a small footed belle seeks the ball room. It is their life. They are used to work and do not expect to live without it. They feel at home under the trees, and in the camps, where of an evening they tell their stories through clouds of smoke. The fashions and ambitions that agitate the outside world, if none to them, cause them no unrest. In a certain sense they are happy, insomuch as they eat heartly and sleep soundly. They are doing a more important work than they are aware of. They are filling a great niche in the world that is necessary to be filled, and which, if it were not filled, would be disastrous to trade and progress. The blow of an axe, and the click of the saw are the forerunners of many of the blessings that we enjoy, and which the ones who do so much to produce them are forbidden to enjoy, even if they have a desire to.

INTERESTING FACTS CONCERNING WOOD-PULP.

Until recent years only a few varieties of wood were used in making wood-pulp. The poplar was early liked for this purpose on account of its clear white fibre and the ease with which it could be converted into pulp. Spruce has been considerably used of late, and hemlock makes a good quality of pulp. A large number of factories have been established for the making of wood-pulp alone and there are good reasons why its manufacture should be often carried on separate from the other processes of paper making. Less capital is needed for making pulp only. The cost of a modern wood-pulp mill, with a capacity of five tons a day, is about $30,000, while a paper mill of the same capacity would cost not less than $100,000. Moreover, since pulp, as a commercial commodity, is easily transported, pulp making, unlike the paper making process, which can often be best carried on in or near some city, can be advantageously conducted in an out-of-the-way place, where abundance of timber is at hand, and where water power, the cheapest of motive powers, and often found in connection with the clear, pure water necessary for pulp making, is abundant. Formerly the wood designed for pulp making, after having been reduced to pulp by powerful machinery, was boiled with strong chemicals in a generator, under great pressure, until the mass was digested into pulp ; but recently many mills have introduced the grinding process. The wood, after being steamed soft, is ground by powerful machinery, which almost entirely dispenses with the caustic acid before so largely used, and thereby saves much expense. Of late experiments have been made in Canada with a view to utilizing the vast accumulations of sawdust at the lumber mills for the purpose of paper making, and some of the pulp made from sawdust has been sent to England to be tested. The idea of making paper from sawdust is not new. In 1852, Wilkinson, in England, patented a process of making paper from sawdust, and a man named Johnson also secured a similar patent in England in 1855. Although it is very evident that sawdust could be much more easily made into pulp than solid logs of wood, there are several serious obstacles that prevent the production of a proper quality of this pulp. One is this :—In making paper from wood it is necessary to remove all the bark and also the knotty portions before attempting to reduce the wood to pulp ; but in the process of sawing lumber, portions of the bark and also of the knots are cut away and mixed with the sawdust. Then, too, all kinds of wood are being constantly cut in the saw mills, and the sawdust made of them all mingles and includes much pine pitch, which renders the whole mass of sawdust very objectionable for paper making purposes. To remove these obstacles and some others is the problem, and

it has not been satisfactorily solved. Wood-pulp is so largely in demand that factories for making it can be established with the certainty of doing a good business. So scarce was wood-pulp in the United States during the past season that some of the mills, unable to obtain enough, were obliged to shut down on certain grades of paper.

Two kinds of wood-pulp are used in the manufacture of printing paper, respectively designated as "mechanical pulp" and "chemical pulp." Any ordinary wood which is fibrous, free from knots and decay, and is easily disintegrated, is suitable for making chemical pulp, though the whiter the wood and the less acid it contains the better. The wood is cut into small pieces, diagonally with the grain, by revolving knives, just as logwood is cut for dyeing purposes. It is then treated with a superheated bath of caustic alkali, and afterward subjected to the same processes as are clear rags. In making mechanical pulp no chemicals are used—not even lime. An ordinary white wood is suitable for the purpose, but poplar is preferred, although the dark heart is not used. The process of manufacturing is the most stupid that could have been devised, yet it is cheap. Water power is used, and it is estimated that one cord of wood, with two stones or emery wheels and 30 horse power will produce the equivalent of from 1,200 pounds of dry pulp per day, with the labor of three men—one to attend to barking and sawing the wood, one to attend to the stones, and one to look after the pulp. The wood is used soon after it is cut, or, if seasoned, it must be steamed. The sticks are pressed endwise against the stones or wheels, and with a plentiful supply of water they are literally ground to pulp, thus destroying the fibre. Unlike the chemically prepared article, this pulp is not allowed to dry before being used. The damp sheets are folded, packed in bundles and sold, with an allowance of 40 per cent. for the moisture. To manufacture paper from it, the addition of some kind of fibre is essential—say from 20 to 80 per cent., according to the kind of paper required. Good printing paper is made from the chemical pulp without the addition of any other fibre, and the use of it is desirable in making even the best book paper. Some excellent book paper is made of 40 per cent. of this pulp, and the printing paper now being used by the government is made wholly of white spruce pulp. Machinery of the capacity for making, say 7,000 pounds of rag paper per day, will turn out from 12,000 to 15,000 pounds per day.—*Philadelphia Record.*

THE COMING WINTER'S SUPPLY.

Considerable speculation has been indulged in as to the extent of operations in the woods during the coming winter. By many it is maintained that the enhanced cost of all kinds of camp supplies, increasing the expense of putting in stock, will lead to less endeavor being made to put in a large quantity. Such reasoning is not in accord with the well known practice of lumbermen, which is to run a lumber camp for all there is in it, and cease only when the weather compels a cessation of labor. It is reasonable, then, to conclude, that no man who has ever had a camp, will refrain from establishing one this winter, provided, of course, he has any timber of his own, or can get a job of lumbering from others. Of course it is impossible to predict, or even give a shrewd guess, at the quantity of logs which will be put into the streams, or placed convenient for the operation of the mills; there are too many contingencies of weather to be taken into account, but it is perfectly safe to say that, good winter or bad winter, high prices or low prices for provisions or labor, all the logs will be cut that the streams can take care of, and if the spring freshets are ample to bring the timber from the forest to the mill booms, it will be a perfectly safe proposition that the mills will have all they can do to saw it. And contrary to the experience of former years, not so long back, there is no good reason why this should not be the case. With the present prosperity of the country, largely the result of legitimate, rather than speculative causes, the present mill capacity is none too great in the Northwest, to produce the lumber which a rapidly developing country demands for actual consumption, except under the most extraordinary conditions of the season, such as great floods or drouths, that may bring ruin to the consumer and destroy his purchasing ability, the day of overstocks in lumber has, practically, passed. There was a time when through causes induced by speculation and apparent, rather than the real wants of the country, causes the result of war rather than of peace, the mill capacity was in excess of the demand for consumption, and yearly increasing stocks of lumber at the great distributing points led to a loss in values, through the necessity of keeping the money in active motion, in order to gain even the smallest interest from its possession. Emigration was at its lowest ebb, and the era of development of the prairie, and more especially of the mining districts of the west, had scarcely given notice of its coming.

The market for lumber was then restricted to less than half the territory from which there is now an active demand. Ten years has seen an increase of one-third in the population of the United States, and the prosperity attendant upon good crops, a revival of business confidence, the development of new industries, the extension of old ones, the unprecedented increase in railway mileage, and the opening up and development of immense states, which were formerly known only as sparse settlements upon an extreme frontier—all these, aided by such an immigration as the country has never before realized, have created a use for products of the forest that almost forbids the belief that it can again be said that there is an overstock of logs in the streams, or lumber in the yards. An increased half a dollar, or dollar, in the cost producing logs never frightens a lumberman, especially when he is realizing higher prices for his manufactured stock than he ever did before; and when we see such prices quoted as $9 for culls, $18 and $20 for common, and $38 and $40 for uppers, even for such timber as tne famous Cass river pine of the Saginaw valley; or where we hear of logs selling at $19 per thousand, even allowing them to be the best timber which ever stood out of doors, and remember that these prices are several dollars higher than the same timber ever commanded before, it is folly to think that its owners will be deterred from putting it in because of an extra dollar above the cost of other years in the expense. When, again, such prices as we have quoted can be obtained for the very best of lumber or logs, it is pre-supposable that more ordinary timber will be held at a proportionate advance upon former rates.

Recurring to the original question as to the extent of operations in the forests this winter, we reply that the stocks of next spring will be as large as the ingenuity of man—and these men ingenious and determined lumbermen—can make them by the aid of snow, if the winter be favorable, of rain, if it be wet, of logging railroads, if it be dry; the logs will be put into the full capacity of the saw mills, which capacity does not now seem to be in excess of the demands of that great territory, North, South, East and West, which may be said to stand ready to consume the lumber at an equitable valuation.—*Northwestern Lumberman.*

Timber Limits.

We learn that Messrs. R. and G. Strickland have purchased the Dominion Bank timber limits in the townships of Oakley and Hindon, County of Victoria. We have not learned the price paid, but understand that the limits are among the most valuable in the back country.

ACCORDING to the *Times*, 149 new buildings have been erected in St. Thomas this season at an outlay of $178,350. Last year the number of new structures was 108 and the expenditure $133,650. There are three huge contracts on the boards for next season—the Government buildings, the Grand Central hotel, and the new Presbyterian church.

SEE TO IT?—Zopesa, (from Brazil) will cure the worst case of Dyspepsia. A single dose will relieve in a degree that shows its wonderful curative powers, and its peculiar action upon the Stomach and Digestive Organs. It is a positive and absolute cure for Costiveness and Constipation, acting in a remarkable way upon the system, carrying off impurities. As a Liver regulator its actions are most remarkable. It tones and stimulates the Liver to action, it corrects the acids and regulates the bowels. A few doses will surprise you. Sample bottle 10 cts.

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Situated in the City of St. Thomas, in the County of Elgin, Ontario. For full particulars apply to H. BROWN, Manager, or E. MOORE, President. L20tf

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FOR SALE.

150	Mlls.	White Pine,	1 x 10 Stock.
175	"	do	1 x 12 "
11	"	do	2 x 10 "
20	"	do	2 x 12 "
140	"	do	1 inch Siding.
20	"	do	1¼ "
40	"	do	2 x 10 Joists.
16	"	Cedar,	3 x 6 "
19	"	Basswood,	1¼ inch.

APPLY AT THE OFFICE, L20
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We have added to our plant all the latest improved machinery for Electro and Stereotyping, and the manufacture of Printers Furniture, facilities for executing work which no other establishment in the Dominion possesses, and not excelled by any on the continent. A large assortment of various cuts constantly on hand.
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LIGHT and HEAVY BRASS and IRON CASTINGS.
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The Walkerville Foundry
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MACHINE WORKS.
Walkerville, Ont., June 1881. ...1

Market Reports.

TORONTO.

From Our Own Correspondent.

NOVEMBER 8th.—The open weather of the past two weeks has kept shipments of lumber nearly up to the same figure as in the two weeks preceding. The average number of cars of lumber per day arriving here for local use and for shipment during the last two weeks has been about fifty, so that averaging each car at 10 M., would foot up about half a million, as our daily receipts by one road alone; so that if we include our receipts by other roads it would doubtless foot up something like 700,000 ft. per day. The quality of the lumber also has been much better on latter shipments. The writer noticed two trains, of fifteen car loads each, the aggregate value of which would be in the vicinity of $10,000 on the rail here.

The docks are entirely cleared, and nearly all the lumber now being shipped goes straight off the cars on to the vessels, and should the present fine weather continue for two or three weeks longer, considerable lumber will yet reach the American market, and I venture to affirm, without fear of contradiction, that less lumber will be wintered over here than during any winter for the last ten years. Most of the mill yards will be thoroughly cleaned out of all they have been able to manufacture, but the quantity made has doubtless come far behind the anticipations indulged in by mill men in the early part of the season. The long drought experienced during the summer months interfered seriously with the season's operations. Lath has become scarce, as indicated in my last letter, and it is difficult to procure sufficient to keep the local market supplied, and the consequence is an advance of 20 cents per M. over former prices, and the probabilities are that retailers will demand from $1.90 to $2.00 per M. before the season closes.

The stocks at the various yards throughout the city are still quite limited, more especially in bill stuff, which still continues exceedingly scarce; in fact all the yards combined could not fill a bill of any magnitude where timber and joisting predominated, indeed, the only plentiful kind of lumber on the market at the present time is cull boards, of which there is a full supply.

Good cherry, butternut and walnut continue scarce, and the latter has advanced in price steadily, $200 per thousand being the retail price now demanded for a choice article. Cedar posts are also hard to obtain of sufficiently good quality for block pavements, and large quantities will no doubt be got out this coming winter to meet the demand next spring and summer, and, in order to obtain suitable timber, higher prices will have to be paid by contractors in order to insure a proper supply.

QUOTATIONS, CAR LOADS.

Mill cull boards and scantling	$ 9 00
Shipping cull boards, promiscuous widths	11 00
" stocks	13 00
Scantling and joist, up to 16 ft	11 50
" " " 18 ft	12 50
" " " 20 ft	13 00
" " " 22 ft	13 50
" " " 24 ft	14 00
" " " 26 ft	15 00
Scantling and joist, up to 28 ft	16 00
" " " 30 ft	18 00
" " " 32 ft	20 00
" " " 34 ft	22 00
" " " 36 ft	23 00
" " " 38 ft	26 00
" " " 40 to 44 ft	32 00
Cutting up planks to dry	18 00
" boards "	16 00
Sound dressing stocks	14 00@16 00
Picks Am. inspection	26 00
Three uppers, Am. inspection	34 00

B. M.

1½-inch flooring, dressed	28 00
1½ " " rough	14 00
1¼ " " dressed	24 00
1¼ " " undressed	14 00
1 " " dressed	20 00
1 " " undressed	15 00
⅜ Beaded Sheeting, dressed	20 00
Clapboarding, dressed	12 50
XXX sawn shingles, ℔ M	2 80
XX sawn shingles	2 75
Sawn Lath	1 75

THE CAUSES OF COLDS are getting overheated in hot rooms or crowded assemblies, sitting in a draught, or cooling too rapidly after exercise, muffling up warm and changing to light wrappings cold and damp feet. No matter what is the cause Hagyard's Pectoral Balsam is the cure for all throat and lung diseases that induce consumption.

MONTREAL.

From Our Own Correspondent.

Nov. 9th.—The demand for building lumber has been pretty brisk since the date of our last report. Stocks of all kinds of lumber here are now pretty full, but not much more is expected to arrive this fall, as sawn lumber is now difficult to get at Ottawa. Our prices continue as last quoted, and are likely to remain so for some time to come. Four large rafts passed down the river on the 4th inst. for Quebec, apparently anxious to reach their destination before the frost sets in. The shipments from this port since the 22nd ult. were to Buenos Ayres, 1,034,401 ft., and to Monte Video, 385,104 ft. These are probably the last shipments for this season, there may be one other cargo, but this is uncertain. The total shipments to the River Platte since the opening of navigation to date were 10,601,842 ft., against 8,133,944 ft. for the same period of last year, showing an increase of 2,467,898 ft. For building lumber, ex yard, we continue to quote :—

Pine, 1st quality, ℔ M	$32 00@40 00
Pine, 2nd " ℔ M	18 00@24 00
Pine, shipping culls, ℔ M	12 00@15 00
Pine, cull deals, ℔ M	8 00@10 00
Pine, mill culls, ℔ M	5 00@ 6 50
Spruce, ℔ M	8 00@10 00
Hemlock, ℔ M	8 00@10 00
Ash, run of long culls out, ℔ M	16 00@18 00
Bass, " " ℔ M	14 00@16 00
Oak, ℔ M	35 00@45 00
Birch, ℔ M	17 00@20 00
Hard Maple, ℔ M	18 00@25 00
Lath, ℔ M	1 25@ 1 35
Shingles, 1st, ℔ M	3 00@ 0 00
Shingles, 2nd, ℔ M	2 00@ 0 00

CORDWOOD.—The demand for cordwood has slackened off since the date of last report, but in a short time, when the weather turns colder, it will most likely revive; prices have receded a little. Fair quantities are arriving by boat since the river has risen somewhat, and when winter roads are good for sleighing, there will be large lots of dry wood coming in from the bush. We now quote prices on the wharf, ex cartage, as under :—

Long Maple	$6 50
Short "	6 00
Long Birch	6 00
Short "	5 50
Long Beech	5 50
Short "	5 00
Long Tamarack	5 00
Short "	4 50

OTTAWA.

From Our Own Correspondent.

Nov. 10th.—The saw mills in this section are all running in full blast, day and night, but will have to shut down in the course of about two weeks. There has been no lack of rain of late, and the rise in the river has facilitated the getting down of logs, which were stuck in the rapids at several points on the Ottawa and the Gatineau. The total cut of lumber for the season will fall considerably short of the quantity produced last year, owing to the lack of log supply during the low water season. It is questionable whether the cut of some of the firms in this locality will reach the quantity sold last spring. Some of the yards are quite bare, as compared to former years at this time, and it is quite evident that the quantity that will be held over will not be nearly so large as for many previous winters.

No large sales of lumber have been reported for some weeks past, as most of the manufacturers are doubtful whether they will be able to fill the contracts made last spring or not. There are no changes in the quotations to note since the last were given, although the market is firm with an upward tendency.

QUOTATIONS :—

Shipping Culls, per M	$00 00@11 00
Stocks	16 00@23 00
Sidings	25 00@35 00
Mill Culls	7 00@ 8 00
Lath	1 00@ 1 10

The freight business was fairly active during the past couple of weeks, but is now becoming dull, as tow steamers and barges are lying up for the winter season. The last of the American boats leave to-morrow, and Canadian boats are going into winter quarters as fast as they arrive. There was no further rise in freight rates as expected, owing to the limited supply of lumber to be shipped. It is expected that about the usual quantity of lumber will be shipped by rail during the coming winter.

The Government engineers have completed their survey for a dam at the foot of Lake Temiscamingue, to hold back a reserve supply of water, so that it could be brought into requisition at the low water season, and aid in the getting down of logs and square timber.

The log drives on the Ottawa and Gatineau rivers will be completed in about a week from the present time of writing. More difficulty has been experienced this year in getting down logs than ever before, and the lowness of water is attributed in a measure to the clearing up of the country.

The last lumber train from the Mattawan to Quebec has passed down. There were 920 car loads in all transported for the Scotch Canadian Lumbering Co. This company carries on operations on the Georgian Bay as well as on the Upper Ottawa, doing a large trade. They are sending a good many men up the river this winter, and will take out double the quantity of timber and a large lot of logs. It is contemplated by the firm to place on the market next season a million feet of square timber, and to take out 125,000 logs.

All the mill men in this section are sending large numbers of men up the river, and more square timber and logs will be taken out this winter than for a good many years back, in fact more than at any other period. The outlook is considered promising.

Mr. Edward Prince, manager of the factory at Horse Shoe Bay, on the Lower Ottawa, has shipped during the past summer fourteen large loads, or some 700 cords, of match blocks to Wilmington and Westville, U. S. Splints for the manufacture of matches were formerly manufactured at the factory, but the U. S. authorities levied duty upon them, so that the blocks were only made ready to be transformed into splints. Several gangs of men are being sent to the woods to cut logs for this factory, which is connected with the Beecher, Swift & Courtney firm.

The disease known as "Pink eye" has broken out amongst the horses in the shanties of Mr. J. R. Booth, on the Upper Ottawa.

ST. JOHN, N. B.

From Our Own Correspondent.

DEALS.

The stock of deals continues very low, and there cannot be much change in this respect for the remainder of the season. The country mills are nearly all shut down, for want of logs; the few deals that come into market from that direction are selling at about $9, while those of city manufacture are worth $10.50.

LOGGING OPERATIONS.

The want of activity in the operations for logging, noticed in our last report, continues. There is no doubt whatever but the cut of logs the coming winter will fall far short of the average, and as the streams have been pretty well cleared of the old logs during the past season, the supply for next year's sawing must be very limited indeed.

FREIGHTS.

The freight market can scarcely be said to have undergone any change. The last charter reported was the *Andrew Johnson*, 2,005 tons, for Liverpool, at 56s. 3d.; this being a very large ship, this figure may be considered rather below the market rate, which we would quote about the same as in our last, say 57s. 6d.

SHIPMENTS.

The shipments of deals and other sawn lumber are as follows :—

For Europe	6,337,000 Sup. feet.
" United States	3,109,000 "
" Africa	728,000 "
" Australia	1,828,000 "

SHIPPING.

Our shipping list shows quite an increase, and as a number of vessels have yet to arrive, the prospect is that we shall have no deals left for winter. A somewhat interesting occurrence took place here on Saturday, in the sailing of two large ships for Australia, viz., the *Mallville*, 924 tons, and the *Walter D. Wallet*, 1,413 tons, both with deal cargoes, amounting to 725,000 feet, and 1,103,000 feet respectively. The incident is noteworthy as indicating the development of a comparatively new department of our wood trade, a very few shipments having been previously made direct for that destination. Both ships are cleared for Adelaide for orders, and it will be interesting to note the time of each on their arrival at the Antipodes. We wish them *bon voyage*.

The following is a list of the vessels in port, with their tonnage and destinations :—

Wm. Stephenson, 749, United Kingdom.
Pusnaes, 503, Dublin.
Vandyck, 1,377, Liverpool or London.
Topaz, 196, United Kingdom.
St. Joseph, 385, East Coast Ireland.
Loining, 821, United Kingdom.
Sybilla, (s), 1,329, Liverpool, Glasgow or Bristol Channel.
Angel, 193, Mediterranean.
Paramatta, 925, ——
Lord Palmerston, 649, Cork.
Latona, 945, Liverpool, London, or Bristol Channel.
Bertie Biglow, 1,142, Liverpool.
Wickham, (s), 1,124, Liverpool, London, or Bristol Channel.
Andrew Johnson, 2,005, Liverpool.
Thos. N. Hart, 1,200, London.
L. H. D'Vehed, 599, ——
Oliver Emery, 623, ——
E. M. Gregory, 387, discharging.
Sea Bird, 333, waiting.
Kodiac, 420, ——

Nov. 7th, 1881.

CHICAGO.

The *Northwestern Lumberman* says :—The cargo market, during the past week, has not only been a smaller one than usual, but as well, remarkably quiet. The weather has not been favorable for dealers to "hang around" looking for bargains, and the attendance has been scarcely up to the average. The offerings have not been large, and although each day has shown some cargoes awaiting purchasers, and each day has seen the fleet nearly or quite cleaned out, the fluctuations in prices have been very slight. Ordinary piece stuff, which is the barometer of the market, has sold at $10.25 and $10.37½ to $10.75, while long lengths have ranged according to the proportion in the cargo, from $10.50 to $13. The better grades of lumber have ruled firm throughout the week.

Shingles have been in slightly better favour, sales being made at $2.37½ for brands which had not been previously held above $2.35. Quotations at this writing stand at about $2.20 to $2.30 for standards, with A bringing from $2.37½ to favorite brands at $2.65, at which latter rate a cargo was sold October 1.

Freights have been rather dull and inactive, and many vessels are going into winter quarters from inability to meet expenses. The advancing wages and the high cost of provisions, the inclemency of weather which may reasonably be expected during the month of November, is ordinarily compensated somewhat by increased rates of freight; but the outlook for a profitable month to the vessel interest is anything but promising.

CARGO QUOTATIONS.

Joist and scantling, green, ordinary lengths	$10 25@10 75
Joist and scantling, green, 20 feet and over	12 00@15 00
Mill run, choice green	16 50@21 00
Mill run, medium, green	13 00@16 50
Mill run, common, "	11 75@13 00
Shingles, standard	2 25@ 2 35
Shingles, extra A	2 35@ 2 60
Lath	1 85@ 1 90

LAKE FREIGHTS.

Manistee	$2 25
Muskegon	1 87½
Ludington	2 00
Grand Haven	1 87½
Menominee	2 12½@2 25
Sturgeon Bay	2 12½@2 25
White Lake	2 00
Ford River	2 00

The condition of trade at the yards in this city has not materially changed from that of last week. The weather, much of the time, all over the country tributary to Chicago, has been unpropitious to trade, but, notwithstanding this fact, a fairly active demand has prevailed, orders coming in quite freely. The call for lumber in the interior is, with most dealers, fully equal to their ability to supply it, on account of the difficulty in procuring cars promptly. Some trouble is experienced by individual concerns in always finding the requisite amount of stock dry enough to ship to fill orders, though it is asserted that there is enough in the district, if it was only equally distributed among the dealers. The fact is, no doubt, that dry stocks are much broken, and in many instances run down. This is an indication that the volume of trade during the season has been heavy. The lowness of dry stocks on the Mississippi, and the dubious condition of the manufacturing interests along that river, will likely make a loud demand for all the available lumber here, and this fact should tend to stiffen prices.

The late soaking rains have put stocks in bad condition for shipment, on account of the extra weight lumber has taken on by absorption of dampness.

Receipts and shipments of lumber and shingles for the week ending November 2:—

	RECEIPTS.		SHIPMENTS.	
	Lumber.	Shingles.	Lumber.	Shingles.
1881	42,413,000	20,900,000	45,120,000	18,150,000
1880	51,695,000	17,820,000	41,614,000	18,660,000

Receipts and shipments of lumber and shingles from January 1 to, and including, November 2:—

	RECEIPTS.		SHIPMENTS.	
	Lumber.	Shingles.	Lumber.	Shingles.
1881	1,618,365,000	691,652,000	1,555,773,000	746,690,000
1880	1,362,836,000	562,378,000	1,286,652,000	622,874,000
In...	255,529,000	129,274,000	269,121,000	123,816,000

STOCK ON HAND NOVEMBER 1.

	1881.	1880.	1879.
Lumber	541,763,015	509,304,599	414,575,858
Shingles	241,445,200	178,985,000	153,274,000
Lath	38,333,925	52,459,483	31,612,310
Pickets	2,788,430	1,823,194	1,148,966
Cedar posts	211,048	85,904	85,904

BOSTON.

The *Journal of Commerce* says:—Reports coming in show the market to be as active as for any previous week. The call for pine stock is immense, and many large orders have been filled. Dealers who possess good stocks of No. 1 grades feel that they are in a position to reap a great harvest, if present indications do not fail. The amount of building going on and in contemplation is drawing largely on the supply of western lumber. This fact, together with the rise in freights, is likely to strengthen values very materially. Hard woods continue in good demand, especially black walnut. Basswood, which has been somewhat quiet, is quoted at $25@30. Ash has not been neglected, and some very fair sales have been made. The following are cargo prices:—

CANADA PINE.

Selects, Dressed	$48 00@50 00
Shelving, Dressed, 1sts	40 00@42 00
" " 2nds	33 00@35 00
Dressed Shippers	27 00@29 00
Dressed Box	18 00@20 00
Sheathing, 1st quality	42 00@45 00
" 2nd "	34 00@35 00

ALBANY.

Nov. 8th.—The *Argus* says we have a steady trade to report in pine lumber, with ample receipts and a well-assorted stock. The shipments, both from the river and canal sides of the districts, continue to be free to the south and east by barges and by vessel. Prices are steadily maintained.

Hardwoods are in good supply and demand, and are unchanged in prices.

Coarse lumber is arriving freely, and is in large demand at quotations; the demand does not permit any accumulation of stock.

The receipts of lumber by lake at Buffalo for the week ending November 7 were 11,600,000 feet, and by rail 61 cars. The receipts by lake at Oswego for the week were 4,609,000 feet.

The receipts by canal at Albany from the opening of navigation to the 8th inst. were:—

	Bds. & Sctl., ft.	Shingles, m.	Timber, ft.	Staves, lbs.
1881				
1880	340,627,500	6,379	10,685	638,200

Freights from Bay City to Buffalo and Tonawanda, $3.00 ₱ M.; from Saginaw, $3.25. From Tonawanda to Albany, $2.45 to $2.50. From Oswego to Albany $2.00. From Port Hope to Oswego, $1.40. From Ottawa to Albany, by boats, $3.50 ₱ M. feet.

River freights are steady:

To New York, ₱ M ft	$ @1 00
To Bridgeport	@1 37½
To New Haven	@1 37½
To Providence, Fall River and Newport	2 00@2 25
To Pawtucket	2 25@2 50
To Norwalk	1 25@1 30
To Hartford	@2 00
To Norwich	@2 00
To Middletown	@1 75
To New London	@1 75
To Philadelphia	@2 00

TONAWANDA.

CARGO LOTS—SAGINAW INSPECTION.

Three uppers	$40 00@45 00
Common	17 50@20 00
Cull	11 50@12 50

THE MOBILE, ALA., LUMBER TRADE.

Through the kindness of Messrs. Guy Bevan & Co., of St. John, N.B., and Mobile, Ala., we are enabled to give the following particulars with regard to the lumber trade of Mobile for the year ending the 31st of August, last:—

LUMBER.

This branch of trade, which is one of the most important of the pitch pine trade, and one of the leading industries of Mobile and South Alabama, has greatly improved during the past year, and extended its trade to new markets. A good demand prevailed the entire year, and our mills were kept busy in preparing lumber for shipment; in fact, they had at times to refuse orders, as they had more than they could supply, and at the present time the demand is in excess of the capacity of the mills. Nearly four million feet of cypress lumber was shipped during the year from Stockton to New Orleans and Texas in vessels having coasting license. We have omitted this amount from our table as we have no record of last year's shipments. The number of mills in this county and on the Eastern Shore tributary to Mobile, are twenty-one; there are also two new ones building, and they will probably be in operation the coming season. The following table is made up from Custom House clearances and such other coastwise shipments as we could obtain from vessels leaving this port; we have no way of obtaining shipments by all the vessels having coasting license, or by rivers and railroads to the interior:—

FOREIGN.

	1880-1.	1879-80.
Cuba	2,059,645	1,957,440
Jamaica	1,598,067	974,655
Great Britain	1,647,651	582,962
Hayti	1,607,214	530,925
Trinidad	558,734	870,619
Rio de Janeiro	414,554	736,200
Mexico	255,170	1,383,222
France	1,545,626	1,525,715
Germany	450,833	723,901
Various	2,476,323	1,882,391
Total	12,613,817	11,168,030
Value	$188,551,62	$149,396.98

COASTWISE.

	1880-1.	1879-80.
New York	600,473	1,898,215
Texas	2,648,805	476,000
Boston	1,030,000	895,188
Philadelphia	656,573	1,105,000
Baltimore	.....	622,500
New Haven	289,712	.....
Various	322,000	407,295
Total	5,547,563	5,404,198
Total shipments, Foreign and Coastwise	18,161,380	16,572,228

HEWN AND SAWN TIMBER.

We are now at the close of one of the most successful seasons in the pitch pine trade ever enjoyed by this port. The supply of timber throughout the whole season was regular and sufficiently abundant to enable shippers to give their vessels a fair despatch and avoid the annoyance and expense of demurrage, so noticeable during the previous season, and yet it was not too abundant to prevent cutters from realizing remunerative prices almost up to the close of a protracted season. The markets in Great Britain from the close of the season of 1879-80 until early in the present year were very firm, and prices, for large average timber especially, were high. Large sales were early effected, while prices were at their highest, and as the supply of stock and vessels to remove it were sufficiently abundant at moderate rates to enable shippers to perform all their contracts, they enjoyed a very profitable season's work. But, as is always the case in the timber trade, no sooner do the markets of Europe offer inducement to importers than the trade is overdone, the markets glutted and prices dropped below the cost of importation, and the past season was no exception to the rule, aided no doubt by the sympathy of the timber trade with that of iron, which has been drooping in price since early in the spring. Although the prospects for next season's shipments look gloomy enough at present, still there seems but little doubt but that prices will revive when the shipping season fairly reopens, and we will probably see a steady demand for all classes of pitch pine goods (but especially for the larger average of hewn timber) throughout the coming season at prices that will have a fair margin for both shippers and cutters. We are lead to this belief from the fact that the crops throughout Europe are unusually good, and consequently the tone of the market in nearly all branches of trade steady and firm. The immense proportions that shipbuilding on both the East and West coasts of Great Britain is assuming must also be considered an aid to the revival of the timber trade. It is true that the vessels are almost entirely constructed of iron and steel, but it must be borne in mind that the internal fittings (in the construction of which pitch pine is an important item) are still the same, but on a much larger scale. Therefore, with these facts before us it does not seem improbable that the ensuing season will be a fairly good one. We append our annual statement of the shipments of pitch pine to Europe, &c., by which it will be seen how rapidly this branch of trade is increasing in importance at Mobile:—

HEWN TIMBER.

	Cargoes.	Cub. ft.	Value.
1880-81	41	1,364,980	$186,229.28
1879-80	19	524,932	64,095.47
1878-79	14	245,507	30,679.08
1877-78	17	467,521	54,627.36
1876-77	19	491,096	63,314.60
1875-76	12	279,530	33,543.60
1874-75	5	128,152	16,187.18

SAWN TIMBER.

1880-81	28	371,906	52,368.45
1879-80	15	223,075	26,540.43
1878-79		65,519	8,235.87
1877-78		2,248	250.86
1876-77		74,881	9,435.38

STAVES.

The high price paid for timber last year caused more time to be devoted to timber and less to staves, which caused our receipts to be very light and smaller than they have been for years. During the past year a good demand prevailed, and prices ruled from $10.00 to $15.00 per thousand higher than the previous year. Present prices will no doubt be maintained during the coming year, as prices and demand have greatly improved in Europe, and the indications are that during the early winter months staves will probably be $10.00 per mille higher. Nearly one-half of this year's shipments were to Spain. Prices of No. 1 staves have ranged from $120.00 to $130.00 per thousand. The foreign exports for the past three seasons have been as follows:—

1880-81	91,462	$11,316.27
1879-80	121,460	13,351.21
1878-79	120,052	13,594.50
Total	332,974	$38,261.98

SHINGLES.

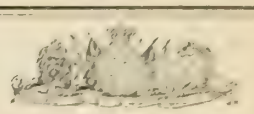
During the past season shippers were fortunate, as the market was plentifully supplied and they did not have to contend with a "scarcity" like they had the first part of the previous season, this caused prices to rule low and made Mobile the cheapest market in the world. Our shipments to foreign ports show a decrease, but those to coastwise ports show a large increase; in addition to this, the shipments by rail, &c., to the interior of Alabama, Mississippi and Georgia, is estimated at 10,000,000 shingles. This shows that the decrease to forign ports has been made up by a strong domestic demand. According to the Custom House records, the shipments have been as follows:—

	Foreign.	Coastwise.	Value.
1880-81	4,110,250	724,000	$23,538.80
1879-80	4,689.200	200,000	19,174.00
1878-79	3,702,300	191,000	17,361.20
1877-78	3,710,300	109,500	17,553.65

The Time to Cut Timber.

Experience teaches that the best time to cut timber is in the summer when in the most rapid season of its growth, and while that season is drawing to its close. The highest authority on this subject advises that the same rule be followed that skilful nurserymen observe in performing the operation of budding—that is, just as the terminal bud on each branch begins to form—as soon as it is first evident that the growth of the branch is about to terminate, but is still in active progress. Experienced tree propagators have found that much earlier than this the juices of the tree are in too thin or liquid a state to form good adhesion between the bud and peeled surface. From the moment the bark separates freely from the wood, these juices continue to thicken until growth ceases altogether, and the new wood is completely formed, and, when this new wood is in the state of a thick paste, then is the time that the bud will adhere most perfectly. This is the period when the bark may be peeled from the tree without destroying its vitality, and this is the time for cutting timber. Early in the spring the tree is full of sap, which is little else than pure water, and which has been gradually accumulating through the winter by the absorption of the roots, with no outlet for its escape, as there is in summer through myriads of leaves. While the tree is thus replete with water it is in the worst condition to cut, but when a portion of this water has passed through the leaves and the rest has been much thickened by conversion into material for wood, then is the time for cutting it.

HAGYARD'S YELLOW OIL will be found invaluable for all purposes of a family liniment. Immediate relief will follow its use in all cases of pain in the stomach, bowels or sides; rheumatism, colic, colds, sprains and bruises. For internal and external use. It has no equal in the world for what it is recommended. For sale by all dealers at 25c. per bottle.



CANADIAN PACIFIC RAILWAY.

Emory's Bar to Port Moody.

NOTICE TO CONTRACTORS.

Tender for Work in British Columbia.

SEALED TENDERS will be received by the undersigned up to NOON on WEDNESDAY, the 1st day of FEBRUARY next, in a lump sum, for the construction of that portion of the road between Port Moody and the West-end of Contract 60, near Emory's Bar, a distance of about 85 miles.

Specifications, conditions of contract and forms of tender may be obtained on application at the Canadian Pacific Railway Office, in New Westminister, and at the Chief Engineer's Office at Ottawa, after 1st January next, at which time plans and profiles will be open for inspection at the latter office.

This timely notice is given with a view to giving Contractors an opportunity of visiting and examining the grounds during the fine season and before the winter sets in.

Mr. Marcus Smith, who is in charge at the office at New Westminister, is instructed to give Contractors all the information in his power.

No tender will be entertained unless on one of the printed forms, addressed to F. Braun, Esq., Sec. Dept. of Railways and Canals, and marked "Tender for C. P. R."

F. BRAUN,
Secretary.

Dept. of Railways and Canals, Ottawa, Oct. 24th, 1881.

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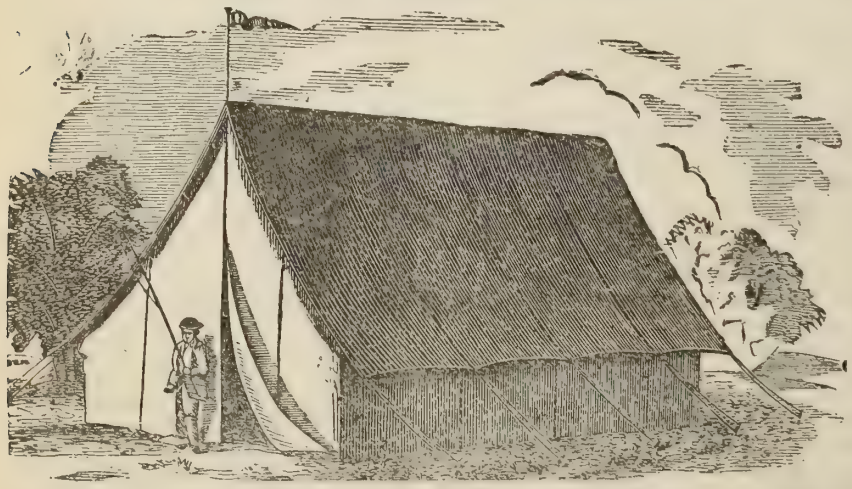

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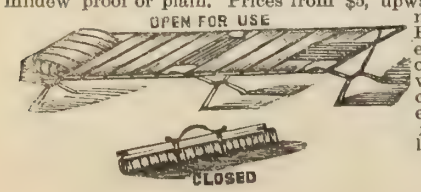

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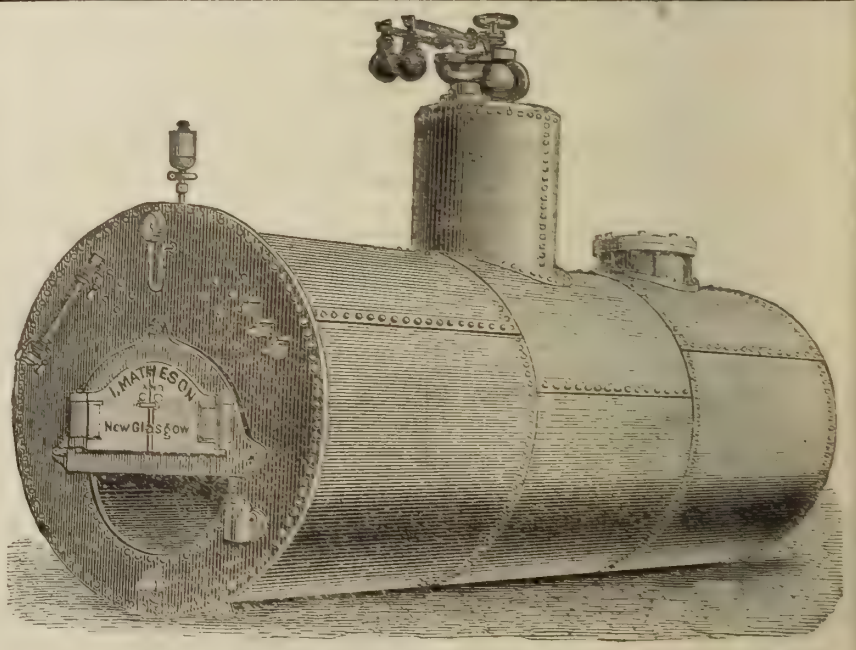

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SAMUEL BRIGGS, Hamilton, Superintendent.

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DETROIT

EMERY and CORUNDUM WHEELS

These Wheels are Wire Strengthened

And Specially Adapted For Saw Gumming

Neither Animal nor Vegetable Glue or Gum being used in their composition, they are NOT LIABLE TO HEAT, and give out no Odors, while

They Surpass All Other Wheels for Free Cutting and Durability.

We refer to the following well known Saw Manufacturers for Opinions as to the Quality of our Wheels :

Messrs. SHURLEY & DIETRICH,
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Messrs. R. H. SMITH & CO.,
ST. CATHARINES.

JAMES ROBERTSON, ESQ.,
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WE ALSO REFER TO

WILLIAM HAMILTON, ESQ.,
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Manufacturer of the Covell Saw Sharpeners.

Messrs. H. B. RATHBUN & SON,
DESERONTO,
Lumber Merchants.

1yL16

Northey's Steam Pump Works

BOILER FEED PUMPS,
AIR AND CIRCULATING PUMPS,
STEAM FIRE PUMPS, and
WRECKING PUMPS.

MINING PUMPS,
PUMPS SPECIALLY ADAPTED for
OIL PIPE LINES,
And CITY WATER WORKS.

No. 47 King William Street.

HAMILTON, ONTARIO.

SEND FOR CIRCULAR. L17-1y

The Rainer Piano Always Triumphant!

CARRIES OFF THE HONORS OF 1880 AS FOLLOWS:

At Toronto Industrial Exhibition, 1st Prize, Diploma & Medal for Best Square Piano
At Hamilton Provincial Exhibition - - - - - - 1st Prize and Diploma
At Brantford Southern Fair - - - - - - - 1st Prize and Diploma
At Guelph Central Exhibition - - - - - - - 1st Prize and Diploma

SEND FOR CATALOGUE.

RAINER, SWEETNAM & HAZELTON,
MANUFACTURERS,
GUELPH, ONTARIO. L14

The Crowning Triumph of the Bell Organ

The Bell Organs have just received the HIGHEST AWARD and SPECIAL PRIZE (Gold Medal) at the International Exhibition, Sydney, Australia, this year for their Organs over all the English and American makers. This, along with the unlimited awards, prove that

THE BELL ORGANS LEAD THE WORLD.

WE RECEIVED
Medal and Diploma.....Provincial Exhibition 1871
Medal and Diploma.....Centennial Exhibition, 1876
International Medal and Diploma, Sydney, Australia, 1877

WE RECEIVED
Only Medal for Parlor Organ, Provincial Exhibition, 1878
Only Medal for Parlor Organ, Industrial Exhibition, 1879
And Gold Medal.....at Sydney, Australia, 1880

The Bell Organ Manufactory is the Largest and Oldest in the British Empire, and the fact that we have sold nearly 15,000 proves that they are the best in the market. We GUARANTEE ALL OUR ORGANS for five years Correspondence invited. Illustrated Catalogue mailed free.

W. BELL & CO.
41 to 47 East Market Suqare, GUELPH, Ont.

L17

Wrought Iron Shanty Cook Stoves

The Best Article ever offered to the Trade.

I have much pleasure in drawing attention to my **WROUGHT IRON COOKING STOVE**, for **Shanty, Hotel and Boarding House use.** These Stoves are made of **Heavy Sheet Iron**, the top and lining of the fire-box being of **Heavy Cast Metal** and all the connecting parts of substantial **Wrought Iron Work.** The dimensions of these Stoves are as follows:—

SINGLE OVEN STOVE

Top surface contains six 10-inch holes, with ample room between, and one oven 16 x 24 x 26.

DOUBLE OVEN STOVE

The Double Oven has a top surface containing twelve 10-inch pot holes, with two ovens, each 16 x 24 x 26. One fire-box of suitable size for area to be heated. Below will be found Testimonials from some of the leading Lumbermen, who have used my Wrought Iron Cook Stoves since I commenced manufacturing them. They are the names of gentlemen who are well known and reliable, and will carry more weight than any recommendation of my own could do.

The Best Stove I have ever Used.

PETERBOROUGH, May 31, 1880.

ADAM HALL, Esq., Peterborough. Dear Sir,—I have used your Wrought Iron Cooking Stove in our lumbering operations since its introduction here, and have no hesitation in saying that I prefer it to any other. For durability, economy and efficiency, where a large number of men are employed, it is the best stove I have ever used. You can, with confidence, offer it to hotels, boarding houses and lumbermen.

Yours truly, THOS. GEO. HAZLITT.

The Stove for Lumbermen.

PETERBOROUGH, June 1st, 1880.

ADAM HALL, Esq., Peterborough. My Dear Sir,—We have used your Wrought Iron Cooking Stove and find it is very satisfactory for lumber operations, especially so on drives. We can recommend it highly.

Yours truly, IRWIN & BOYD,

Gives the Greatest Satisfaction.

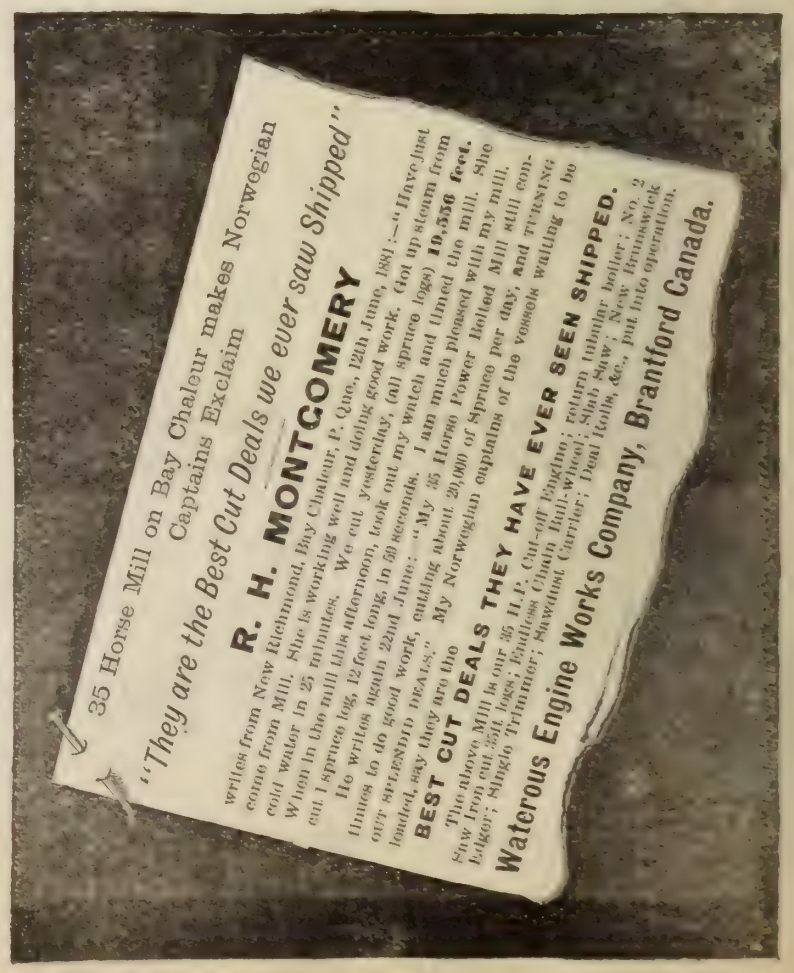
PETERBOROUGH, June 3rd, 1880.

A. HALL, Peterborough. Dear Sir,—I have had the Wrought Iron Cook Stove, purchased from you, in constant use ever since last fall, and it gives the greatest satisfaction in every respect. I can recommend them highly to any one who is in the lumber business. Very truly yours, GEO. HILLIARD, M.P.

EVERY STOVE GUARANTEED

All the necessary TINWARE and CUTLERY for Shanties suppied at the Lowest Prices.

ADAM HALL, Peterborough.



LUMBERMEN

Will always find a Large Stock of

Shanty Blankets

AND

HORSE BLANKETS

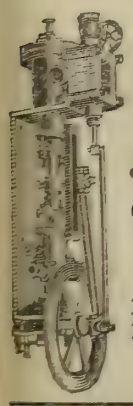
At LOWEST Mill Price, at

JNO. MACDONALD & CO'S

TORONTO.

Send Sample Order for our LINED SHAPED HORSE RUG, a pecialty highly recommended for Wear and Warmth

6L22



A. LEARMONTH & Co.

ENGINEERS AND FOUNDERS,

MANUFACTURER OF

Steam Engines, Rotary Pumps, of all sizes, for Paper and Pulp Mills, Steam Pumps, and a Variety of other Pumps, Propeller Engines for Yachts & Tow Boats.

L24-1y

Iron Railings, Hoisting Machines for Stores, Jack Screws, Park Mills, all kinds of Machinery for Mines, Saw Mills, Flour Mills,

St. Paul St., QUEBEC.

ABRAMS & KERR

MANUFACTURERS OF

Steam Engines, Mill Gearing, Rotary Mills, ha fting, Planers, Hangers, Pulleys, Variety Moulders.

SPECIAL MACHINERY MADE TO ORDER

Latest Improved Spool and Bobbin Machinery.

Every Variety of Heavy and Light Casting.

L24-1y

Foundry and Machine Shop on City Road,

ST. JOHN, NEW BRUNSWICK.

Flour Making by the New Process

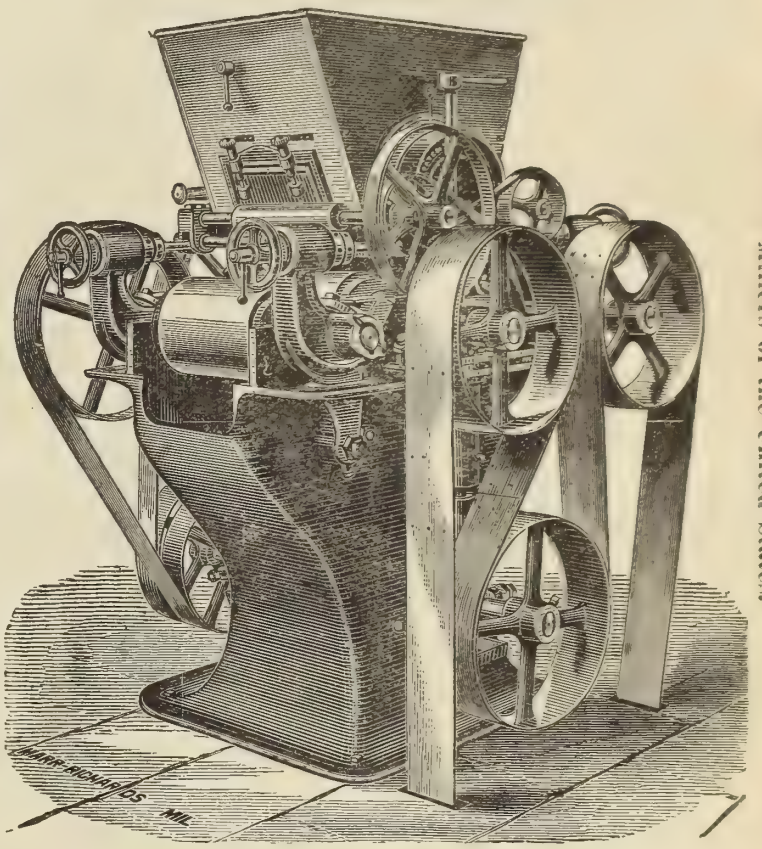
GRAY'S PATENT

NOISELESS ROLLER MILL

A Model of Perfection!

Every Mill a Success!

CORRUGATIONS of all Descriptions. Smooth Iron or Porcelain ROLLS.



☞These Roller Mills are used by all the Representative Millers of the United States.

The Machine is Perfect in all its adjustments, and RUNS WITHOUT NOISE.

It is doing Better Work than any other Machine in use.

Automatic Lubrication of Principal Bearings.

Driven entirely by BELTS.

Differential Speed always insured.

WEYMAN'S NEW IMPROVED PATENT

Porcelain Rolls

The BEST ROLL FOR MIDDLINGS in the world. Over 6000 in use in this country and Europe. Send for particulars.

MILLER BROS. & MITCHELL,

Nos. 110, 112, 114 and 116 KING STREET

MONTREAL.

SOLE LICENSEES FOR DOMINION.

Manufacturers of Improved Hoisting Machinery, MINING and CONTRACTORS' PLANT. Importers of BEST STEEL WIRE ROPE. Mention this Paper.

L24-1y

EMERY WHEELS FOR SAW GUMMING!

Solid Emery Wheels are now almost in universal use for the purpose of gulletting and gumming saws. Statistics show from 25,000 to 30,000 saw-mills in the United States. Many of these run only a single saw each. A one-saw mill would use one or two wheels a year, costing $3 to $4 each, and when such small mills order single Emery Wheels from the factory, the express charges often equal the cost of the wheel. There was a time when the quality of Emery Wheels was so uncertain, and the demand so fickle, that storekeepers could not afford to carry them in stock. Now, however, Saw Gumming Wheels have become as staple an article as Files, and every dealer in saws, Hardware and Mill Supplies can afford to carry a few dozen standard sizes in stock. Large dealers order stocks of $500 to $750 worth at a time. Saw Gumming Wheels are used with the edge (or face) square, round or beveled. Probably seven-eighths of all in use are beveled.

The principal sizes are:

$8\times\frac{1}{4}$, $8\times\frac{3}{8}$, $8\times\frac{1}{2}$ } $\frac{3}{4}$ in. hole. $10\times\frac{1}{4}$, $10\times\frac{3}{8}$, $10\times\frac{1}{2}$, $10\times\frac{5}{8}$ } $\frac{3}{4}$ in. hole. $12\times\frac{1}{4}$, $12\times\frac{3}{8}$, $12\times\frac{1}{2}$, $12\times\frac{5}{8}$, $12\times\frac{3}{4}$, $12\times\frac{7}{8}$ } Holes, $\frac{3}{4}$, $\frac{7}{8}$ and 1 inch.

Probably more wheels $12\times\frac{3}{4}$, $12\times\frac{1}{2}$ and $12\times\frac{1}{4}$ are used than all the other sizes together. Saw Gumming Wheels are used, however, of all sizes up to $24\times1\frac{1}{2}$. The most frequent complaint is that Emery Wheels harden the saw so that a file won't touch it. The answer is that you don't want a file to touch it. An expert workman will shape and sharpen the teeth with an Emery Wheel, leaving the teeth *case hardened*, in which condition the saw will cut about 33⅓ per cent. more lumber than a soft saw will. Those who want to use the file, however, have only to touch the saw *lightly* a second time (after going all over it once), and this second touch will cut through the case-hardened scale.

A QUESTION OF QUALITY.

Thirteen years of experience as makers of, dealers in, and actual users of Emery Wheels, have led us to a decided opinion as to what quality is the best. We prefer for almost every use an "Extra Soft" wheel like the "Pocono." We believe that money lost through the rapid wear of the wheel is more than made up by the money saved on wages. As we cannot get every one to adopt our views, we make several qualities, so as to meet their views. We say to those who think they can only be satisfied with some other make of wheels (not Tanite), that we can furnish qualities *to match* any and every other make. If you have got used to some special quality of wheel, let us know what it is, and we can send you *a Tanite Wheel of similar quality*. Our *regular* classification of Saw Gumming Wheels is as follows:

CLASS 2. MEDIUM—HARD.—This Wheel is THE STANDARD Saw Gumming Wheel all over the world. Probably seven-eighths of all the Saw Gumming Wheels used are "Class 2. It cuts fast and keeps its shape well. Some think it too hard, some too soft. We prefer the "Pocono."

CLASS 3. MEDIUM—SOFT.—The same as to coarseness and fineness as "Class 2," but a *softer*, and therefor freer cutting wheel.

CLASS "POCONO." EXTRA SOFT.—This Wheel we prefer to all others. It is both *finer* in grain and softer than either of the above. As a Saw Gumming Wheel, Class "Pocono" is specially suited to those practical and experienced Sawyers who know how to grind with a light touch, and who want a free cutting wheel that will not create much heat.

Illustrated Circulars and Catalogue, showing Cuts of Saw Gumming Machines, and Shapes, Sizes and Prices of Wheels, sent free on application.

L13

The Tanite Co. Stroudsburg, Monroe Co. Pennsylvania

CANADIAN TRADE SPECIALLY SOLICITED.

M. Covel's Latest Improved Automatic Saw Sharpener!

Is the Most Perfect Machine that has ever been Introduced into Mills for that purpose.

CIRCULAR SAW STEAM FEED!

I would also call special attention to my

Heavy Circular Saw Mills

and for STEAM MILLS, would recommend the Steam Feed, having put in several which are giving the best of satisfaction, as will be seen by the following testimonials:—

GRAVENHURST, August 20th, 1880.

WM. HAMILTON, ESQ., Peterborough.

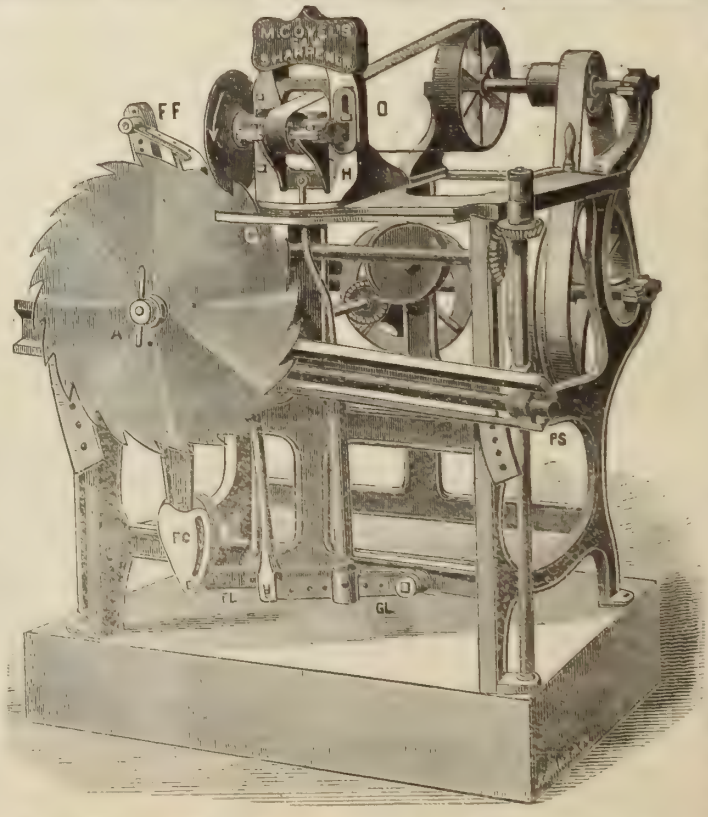
DEAR SIR—I have used your Steam Feed for near four months, and it has given me perfect satisfaction in every way; it is admitted by every person who has seen it work to be the best feed ever invented. Since I put it into my mill, I have not lost ten minutes time fixing anything belonging to it. I can cut 18 boards 13 ft. long in one minute. It can do much smoother and better work than the pinion feed. It is easily governed and reverses the carriages instantly. I am thoroughly satisfied with it and can recommend it to any person who has a Circular Saw Mill for cutting long or short logs. I consider I have cut more lumber than will pay for the Steam Feed since I got it than I would have cut had I not put it in.

Yours respectfully,
WILLIAM TAIT,
Lumberman, Gravenhurst.

TORONTO, August 11th, 1880.

WM. HAMILTON, Peterborough, Ont.

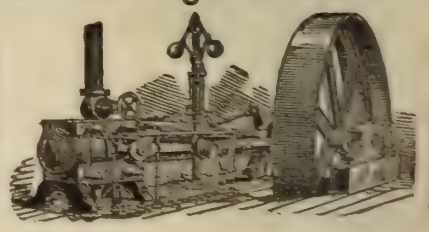
DEAR SIR—The Steam Feed you put in is working splendidly. Yours, &c.,
THOMPSON, SMITH & SON.



MILL MACHINERY!

I am also manufacturing Saw Mill Machinery, for all sizes of Gang or Circular Mills, Span or Double Circulars for Slabbing Small Logs. My Patent Jack Chain for drawing logs into Saw Mills, acknowledged by all to be the Cheapest and best ever got up; also, my Patent Lumber Markers, different sizes of Edgers, Gang Lath Mills, Trimmers, Power Gummers, and all Machinery used in a first class Gang or Circular Saw Mill; also, small Hand Gummers for use in the woods, for Cross-cut Saws. Rotary Pumps of different sizes, for Fire Protection in Mills, &c.

Horizontal Engines and Boilers

CORLISS  ENGINES

Where economy of fuel is the great consideration, along with uniformity of speed, such as is required in Grist and Flouring Mills, Woollen and Cotton Factories, or large Factories of any kind, I supply the Corliss Engine. I feel justified in saying that our Style, Workmanship and Finish on this Engine will be no discredit to its renown, and certainly is not equalled in this country for economy of fuel. I have them working at 2½ pounds of coal per horse-power per hour.

L10

WILLIAM HAMILTON,

PETERBOROUGH, ONT.

THE CANADA LUMBERMAN

AND MILLERS' MANUFACTURERS AND MINERS GAZETTE

PUBLISHED SEMI-MONTHLY.

The only Newspaper devoted to the Lumber and Timber Industries published in Canada.

SUBSCRIPTION $2.00 PER ANNUM

VOL. 1. PETERBOROUGH, ONT., DECEMBER 1, 1881. NO. 27.

FAST SAWING.

Last winter Messrs. Irwin & Boyd determined to take out their old circular in the Nassau Mills, near Peterborough, and replace it with an A No. 1, which for good fast cutting and convenience should be ahead of anything in this lumbering district of Ontario. The contract was awarded to Mr. Wm. Hamilton, of this town, and in due time the job was placed in position, and is a decided success. But as this success was not obtained without encountering some of the difficulties incidental to high speed, and not without furnishing bits of experience worth recording, we shall note a few points that may be of interest to our patrons.

GENERAL DESCRIPTION.

The mill is of a style that is heavy and strong throughout; it is also well fitted, but is not showy. The iron husk, or frame, is $9 \times 5\frac{1}{2}$ feet; saw mandrel, $4\frac{1}{2}$ in. diameter; mandrel pulley, 33 in. diameter by 22 in. face; carriage shaft, $3\frac{1}{2}$ in. diameter; other shafts, 3 in.; feed and gig friction pulleys, 12 in. face; belt for feed cones, 6 in.; gig belt, 10 in. The main driving belt is 18 in., of heavy leather, double and made up endless at the factory in Montreal, ready to be put on, and runs with perfect smoothness, though at the unprecedented rate of 8,000 feet per minute. The feed and gig movement of the carriage was effected primarily by a $1\frac{1}{4}$ in. manilla rope, but as this had been broken several times, it was taken off and a chain used; this has also been frequently broken, but is quickly repaired. The carriage has three head blocks, one being on a detachable portion which is used only for long logs. The dogs of the other two are connected, and are operated by one convenient lever, which is weighted for the double purpose of holding the dogs in either position, and assisting in dogging. On the first head block there is a tapering attachment for setting the log either in or out. There is a friction pulley underneath the carriage which is made to operate against the back track timber while gigging, for the purpose of withdrawing the knees. The set works are on the principle of the frictional bite, and, like the British bull-dog, always bites and never slips; with new retractile stop pins for stock lumber, and new adjustable scale for siding down to stock or any given dimensions; we think this makes the most exact and convenient set works we have ever seen; one man on the carriage dogs and undogs, reverses and sets without any appreciable loss of time. The journal boxes for feed and gig shafts are balanced, and each is suspended by a heavy bolt by which they can be adjusted in a moment for the wear of friction pulleys. The mandrel boxes are cast solid on the frame with large chambers underneath and around them, which provides a good circulation of air to the parts most likely to become heated, or, if required, the lower apertures can be closed and the chamber filled with water. The alignment of the saw with the carriage is made by slightly turning the whole frame, for which a ready means is provided. The true relation of all the parts to each other is thereby retained, and the pivot is so placed that the cutting side of the saw is always the same distance from the carriage. The caps of these mandrel boxes are a sham in the ordinary sense of a close fitting cap, which would serve to keep a journal warm rather than cool. These caps are much like Paddy's beaver, which had the crown hinged to one side, and had also a few convaynient holes jist to kape his head cool. Certainly the whole arrangement serves its purpose admirably, as the journals never rise above blood heat.

STYLE OF WORKING.

The motive power of this mill is furnished by a 66 in. Leffel wheel, working under a head of from 10 to 11 feet, so that this, in common with all water mills, is under two particular disadvantages when compared with mills driven by steam. The motion of water mills varies greatly, particularly when the power is derived, as in this case, from one wheel, and no one seems to come forward with a suitable governor, whereas, steam is easily governed. Besides, steam mills can use the steam feed, which is the most marked of modern improvements in sawing lumber. The rate of feed depending entirely upon the conditions of each particular cut, the sawyers can always make the most of them; logs can be fairly shot each way, or go at a snail's pace. With the water mill you must be always content with a good average feed. This mill was calculated for a six foot saw to run at 750 revolutions per minute; it was expected not to rise higher than 800, nor to fall at any time much below 600. On trial, however, with a five foot saw, it ran as high as 950, and fell, in cuting a large log, to less than half that speed. This was an awkward condition of things; she was both fast and slow,—at times fully at the dangerous point, aud yet no good turn out of work, besides no saw could cut well under such changed conditions, and casualities were common. By a change of gearing the speed was reduced fully to the original calculation, with satisfactory results,—greater steadiness of motion and a large amount of good sawing. But as the mill was being worked from week to week, and all the bearings came to a more perfect face, with also a slight change in regard to head of water, the speed was found again to rise, the speed indicator showing 825. The six foot saw was required and put on, but not being hammered to so high a speed, it refused to do duty. The saw-maker was brought on the scene, and he advised a further reduction, which was made, bringing the speed to the neighbourhood of 700, resulting in greatly improved steadiness, less wear and tear, and good account of lumber. She would drop readily ten boards per minute. We saw this being done in the course of ordinary work. This, for a water mill, is hard to beat. It is only the few steam mills, having steam feed, that can make a better showing; they are said to make, on special trial, as much as sixteen 16 ft. boards in one minute. A small, but by no means trifling, matter was demonstrated in regard to paper friction pulleys for feeding and gigging, that is, that their circumferential speed cannot go much beyond 2,000 feet per minute without causing excessive heat, and of course excessive wear.

Upon the whole Messrs. Irwin & Boyd may be congratulated on getting what they bargained for. They certainly have the speediest, most exact and convenient mill in this region.

TERRIBLE EXPLOSION.

EIGHT BOILERS TORN TO SHREDS AT EAST SAGINAW—FOUR CANADIANS KILLED.

East Saginaw, Mich., Nov. 13.—At fifteen minutes before five o'clock this morning a battery of ten boilers in the brick boiler house attached to the saw mill and salt block of Hamilton, McClure & Co., six miles below this city, exploded with an earthqnake force, scattering the buildings like chaff, and causing immense destruction, Eight of the boilers were torn into shreds, and the pieces flew in every direction, one boiler-head dropping 900 feet away. Not a brick of the boiler-house was left standing upon the other, and the large brick chimney, 100 feet high, was ompletely levelled to the ground. The west and of the large steam mill was torn to pieces, and the entire structure wrecked and demoralized. The large steam dome was lifted high in the air and came down on the opposite side of the mill, and bricks, pieces of iron, and timbers were thrown hundreds of feet away. Bricks and timbers were found half a mile from the mill. The salt block was badly wrecked by the explosion, timbers and iron being driven through it, and a salt drill house two hundred feet distant received a piece of boiler that shattered the tower, and another smashed in one side of the roof. It is impossible to give an idea of the tremendous force of the explosion and the destruction that followed. The boilers were fired at night to supply steam for the saw mill, and the firemen at work were all killed, not one escaping to tell the story. Michael Lebeau, head fireman, who had charge of the boiler-house, was covered in the *debris*, and the body was dug out an hour after the explosion occurred. Both legs were broken below the knee and the body was badly bruised. Joseph Lebeau, brother of the first mentioned, was found thirty feet distant with his right arm and shoulder broken, his abdomen crushed in, and his clothing torn off. These men were thirty-eight and twenty-three years old respectively, and resided at Zilwaukee. They came from Montreal years ago, and have relatives in Canada. Frank Blanchard was blown into the bay 200 feet distant, and his body was not recovered until this afternoon. The body was badly mangled. He was a single man, twenty-five years old, and belonged to St. Onesime, Quebec. Charles Carpenter was found only a few feet from Joe Lebeau, his clothing torn off, and his body badly scalded and burned. He was a single man, twenty-seven years old, and came from Quebec. The damage by the explosion will reach $25,000. Low water is given as the cause of the disaster.

CLASSIFICATION OF PROVINCIAL LANDS.

The Canada Lumberman in an article on "A Forest Department," in its issue of October 1st, while remarking on the antagonism which exists between the lumberman and settler, observes as follows:—Surely it would not be difficult to decide what lands should be opened for settlement, and what might be more advantageously maintained permanently as forest. Where the soil is better fitted for forest growth than agriculture, the settler should be excluded altogether, and a proper system should be adopted for perpetuating the timber growth. Thus our resources—our capital—would be utilized in the most fitting and economical manner. It is certain that mixing up settlement and lumbering has proved a failure." These remarks apply quite as well to New Brunswick as to Ontario. We have not only allowed settlers to locate themselves upon some of our best spruce and hemlock lands, but we have paid them for doing so. We entertain the view, that for the benefit of the settler himself as well as for that of the lumberman, no settlement should be made before the locality has been examined by a fit and competent officer of the Government who shall have reported on the character of the land and the kind and quantity of the timber standing upon it, since if settlers be allowed to locate themselves on spruce or hemlock lands they will be worse off at the end of a few years than when they first settled upon them.

We are sadly at a loss to know where our really good farming lands are situated, as well as regarding our spruce and hemlock lands. Since the information which the country requires regarding this matter can only be obtained by the actual examination by competent persons, we would suggest that the Crown Lands Department take the matter in hand and furnish the public with the information at the very earliest date, and also that they withhold from settlement such tracts of land as may be deemed better adapted to the uses of the lumberman than for those of the farmer. This course would, we believe, be justified both by public opinion and experience, as long as we have in the Province such a vast quantity of good agricultural land still in the wilderness state.—*St. John, N.B., Sun.*

GILMOUR'S MILL AT TRENTON.

Since the burning of the old mill, Messrs. Gilmour & Co. have been doing their best to rebuild as soon as possible, but were greatly hindered in their operations by the unnecessarily long time occupied by the different companies in settling their insurance, which after much delay was finally fixed at $48,000. As soon as this was done a number of men were set to work to tear down what was left of the mill and boiler house, nearly every vestige of which was removed.

As soon as the plans for the new mill were prepared, the contractors for the stone and brickwork at once commenced work on the foundations, which were built of huge blocks of stone, the lowest course of which was built on the solid rock. When these were finished, the boiler and engine houses and the new smoke stack were next commenced and pushed forward rapidly, and are now very nearly completed.

The engine house, which is situated a few feet west of the mill, is built of brick and will contain two new engines, the cylinders of which will be 32 inches in diameter and the length of stroke 48 inches, These engines will be connected to a fifteen inch driving shaft and will exert together over one thousand horse power.

A few feet west from the engine house is the old smoke stack, and close against this and to the west of it is the boiler room, which is built of brick, with a heavy iron roof, and is 100 feet long by 32 feet wide, and will contain sixteen tubular boilers, each of which will be four and a half feet in diameter, and fourteen feet long. The furnaces will face the bay, and will, we understand, be fed automatically with sawdust.

The new smoke stack is built close against the western end of the boiler room, and is about the same size as the old one.

The frame of the mill, which is made of heavy timbers, framed together with great neatness and exactitude, is now up and sheeted all around. The roof is on and is covered with with heavy sheet iron painted over with a brownish paint. The main body of the mill is 172 feet long, by 85 feet wide, and will contain two twin circular saws, one single circular saw, three twin gangs, two stock gangs, edgers, slash tables, and a large amount of other machinery, of which we will give a more detailed account as soon as it is in running order. At the northwest corner of the mill there is a wing 75x36 feet, which will be devoted to the lath machinery, and directly opposite this, on the other corner, there is another wing 30x125 feet, in which will be placed the butting table and machinery for assorting the lumber.

The small mill is now running night and day and cutting (considering its size) a large quantity of lumber, besides giving employment to from 150 to 200 men. The capacity of this mill will be greatly increased, as soon as it shuts down for the winter, by the putting in of several of the boilers out of the old mill, together with a much more powerful engine than that used at present.

A number of alterations have been made in the planing mill and machine shops. A new boiler house 46x26 feet has been added to it. This contains a 75 horse-power engine and four large tubular boilers, which greatly increase the capacity of the shops. The small engine which was formerly used here will still be left in its place, and will be used for pumping water to supply the large tank in the yard and also to drive the necessary apparatus for lighting the entire mill with electricity. The apparatus will soon arrive, and we will furnish a detailed account of it as soon as possible. We believe it is the Company's intention to build a large sash factory in connection with the planing mill, which is now over driven on account of the large local demand for planed lumber.

The mill will be ready for operation before the opening of navigation, and will give employment to about 700 men, so that this enterprising firm will pay out in wages alone during the summer months fully $14,000 per month, which amount will doubtless nearly all go into the pockets of the local business man.

I am indebted for much of the above information to the ever courteous and affable engineer of the establishment, Mr. R. D. Gilmour.—*Belleville Intelligencer.*

THE GALE OF OCTOBER 14.

In the November issue of the *Journal of Forestry* there appears a very interesting and instructive record of the terrible and almost unprecedented effects of the late storm upon trees and plantations. The editor of that periodical distributed circulars, inviting short accounts, to ascertain the general effect caused by the gale, and the fact that the replies fill some seventeen pages of the magazine demonstrates how severely the memorable storm was felt throughout the whole country. As some of the worst disasters occurred to old historical trees, that have stood for centuries on spots well known to our readers, we make the following brief extracts :—

In Windsor Park and Woods the oldest trees have suffered most, particularly the beech and elm. The pollarded oaks near Forest Gate, supposed to be from 500 to 800 years old, have been much broken in the heads. The number of trees blown down was 961, and total damaged 1,074, making in all 2,008 trees wholly or partially destroyed. At Eton, two of the fine old elms in the playing fields were blown down. These trees were planted, our contemporary says, by Provost Rouse, a Speaker in the House of Commons in the time of Cromwell. In the Forest of Dean one large old oak, 220 years old, was broken off about half way up, being decayed ; and two large beech trees, about the same age, suffered similarly. In the New Forest a considerable number of decayed beeches and oaks were blown down. An ancient ash in Ashurst Wood and a notable old poplar at Bere both suffered. At Stamford an accident befell a noted old lime tree, 300 years old, and planted by "good Queen Bess." The trunk was divided into four parts about seven feet from the ground, each part as large as an ordinary tree ; three of these were blown off, taking part of the trunk with them, leaving only one large and a few small branches remaining. In all parts of London the gale played sad havoc with the Park trees, as well as doing damage to buildings, &c., as reported in the daily papers. On the Worksop Manor Estates, about 500 trees were blown down, at an estimated value of £491. Of these 100 were oak from 25 to 60 years old, and 15 elm, from 70 to 90 years old. At Birdsall, York, Lord Middleton states three of the great limes in Birdsall Avenue fell. One, though denuded of its head, measured 80 feet. In Scotland, on the Langton Estate, Dunse, the number of fallen trees reached 5,000, and a clump of magnificent beeches which had weathered the storms of 200 years at last succumbed. In Dalkeith Park, Edinburgh, a correspondent writes, it will take three months of continuous work to dissect the trees, blast or bury the roots, and repair the broken fences. On the Tynninghame Estate, Haddington, 30,000 or 40,000 trees were blown down, approximately valued at £15,000. One remarkable old beech, named the Trysting Tree, was over 300 years old. The total damage done to this estate reaches £50,000. At Floors Castle, Kelso, 800 of the finest trees were uprooted, and 200 otherwise damaged. Within a radius of four miles round Kelso some 3,000 large trees were uprooted, valued at £6,000. In Ireland, some fine old ashes and elm fell in the grounds of Antrim Castle ; and in Wales many old and valuable trees were uprooted or damaged at Penrhyn Castle, Bangor, and other well known seats. "It is difficult," remarks the editor, "to point to any district where trees have not suffered severely from the effects of the gale."

LOSS BY FOREST FIRES.

The Dominion Government employs what are denominated "bush rangers," who take care of the government's timber limits. Since the great fires of last summer, bush rangers and agents have been ordered to, as nearly as possible, ascertain the amount of damage caused to timber by these conflagrations. Estimates have already been made of the loss in the Ottawa Valley, and it is placed at $5,000,000. In the territory bordering on the Muskoka and Parry Sound districts, and thence eastward to the township along the Ottawa, little or nothing is yet known of the amount of loss. In the Muskoka and Parry Sound regions, great belts, twenty miles or more in length, and from one to five or six miles wide, were burned over, and it is asserted that the smoke of forest fires ascended from every square mile of territory from Lake Nipissing to the Severn. The loss must therefore have been great, and probably quite equal to that in the Ottawa district. Some are inclined to place the amount of loss over this wide stretch of country at only $1,000,000, but that estimate is doubtless much too small, and may be even four or five times below the actual damage. The total loss over the entire Province is roughly estimated at from $10,000,000 to $15,000,000.

The great endeavor will now be to cut the scorched timber and get it into the water before the borer begins its work. Much may be saved in this way, or much may be lost by delay.

This has not been an entirely exceptional year as regards forest fires in the Dominion. Nearly, and perhaps every, year there is a heavy loss. The surveys of the new townships of Bonfield and Boulter reveal a condition of their forest lands which is common almost every where from the Georgian Bay to the Ottawa. Two-thirds of Bonfield was burned over at one time, and a portion within recent years, while one-third of the forests of Boulter have been swept away. The same story is told of all other parts of the pine country by the surveyors who have traversed them.

Taking into consideration the destructive effect of forest fires, and the settlement of the new lands for farming purposes, it is feared that in twenty years the lumber business of Canada will be a thing of the past. Already only the limited tract along the west side of the Ottawa, it is asserted, from Mattawan to Lake Temiscamingue, the wilderness, rapidly diminishing in area, that lies between the County of Peterborough and Lake Nipissing, and a portion of the north shore district, are unbroken by settlement. Half of this area contains no pine of commercial value. Under the present system of waste, one of the leading industries of the country will be crippled by its competition with districts more favored by abundance and easy access. For this reason, those interested in preserving the forests of the Dominion are calling for legal protection of the standing timber. —*Northwestern Lumberman.*

FENELON FALLS.

Mr. John D. Smith, the well known lumberman having removed with his family to Port Hope, after a residence of fourteen years in this village, a number of their friends resolved to present Mrs. Smith with a piece of plate. The presentation was made at the Mansion House, in the presence of a large number of ladies and gentleman, by Mr. H. W. Greene, Reeve of the village, who expressed the regret of the donors at the departure of herself and her husband, and their sense of the loss that would be thereby sustained by their little community. Mrs. Smith responded in suitable terms. There was subsequently a supper given to Mr. Smith at the McArthur House, in which seventy-five persons participated, including the leading men of the village and neighbourhood, the Reeve being in the chair. There were present a number of Mr. Smith's employees, thus testifying to their mutually satisfactory relations. Mr. Smith will be greatly missed from among us.

Interesting and Valuable.

The *Montreal Shareholder* says the Canada Lumberman explains by its name the special interest it devotes itself to serve. This periodical, published semi-monthly, is very ably conducted, and full of interesting and valuable matter connected with the lumber trade and the wood bearing portion of our national domains. Everyone interested in lumber should take it.

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46 Church Street, Toronto.
Sells all sort of Lumber on Commission. Advances on Consignments. Prices given on application. Whole Stocks disposed on very low Commission. 1yl16

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111 Acres of Land, Four Frame Houses, Etc.
Plenty Timber on Black River. Or, Mill and Limits two thirds cash. 4l27
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WE HAVE
Oak, Elm, Basswood and Black Birch,
FOR SALE, to be Cut this Winter, apply to
Medonte Lumber Co'y, Hillsdale
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ABOUT
25,000 Feet, First Quality
White Oak Lumber
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Address, stating Lowest Price and probable time of delivery to the
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Timber Limits & Sawmill
FOR SLE.
The subscriber being anxious to concentrate and consolidate his business, on account of his age, will sell at very low prices—
1st. His Mills and Farm near the Bradford Station, Northern and North-Western Railway, together with Limits in Ridout and Sherbourne.
2nd. The Portage and Canal connecting Black River with Lake St. John, and Lake St. John with Lake Couchiching, in the Township of Rama.
3rd. Eight million feet of saw-logs now in Black River.
4th. About 4,000 acres of land in different townships.
If not sold at private sale, the above will be offered to the highest bidder at some future time to be named, as I intend to close all out and concentrate in Michigan, where I now have mills.
All and any information can be had from Thompson Smith & Son, Toronto, or James Durham at Bradford Mills.
4l25 THOMPSON SMITH.

Department of Crown Lands,
TORONTO, 6th October, 1881.
NOTICE IS HEREBY GIVEN THAT, UNDER AN ORDER IN COUNCIL,
TIMBER BERTHS
In the undermentioned Townships in the
MUSKOKA and PARRY SOUND DISTRICTS,
Will be offered for Sale by Public Auction at the Department of Crown Lands at twelve o'clock noon,
On TUESDAY, the 6th day of December next,
viz. :—Townships of Mowat, Blair, McConkey, Hanly, Patterson, Mills, Sinclair, Bethune, Proudfoot, Gurd, Machar, Strong, Joly, Laurier, Pringle, Lount, Nipissing and Himsworth.
The area to be disposed of in the above Townships as Timber Berths is upwards of 1,400 square miles, and to suit all classes of purchasers each Township will, as nearly as practicable, be divided into four berths.
Sheets containing conditions and terms of Sale, with information as to Area and Lots and Concessions comprised in each Berth, will be furnished on application personally or by letter, to the woods and forests branch of the Department, or to the Crown Timber Offices at Ottawa, Belleville and Quebec, and the Office of T. B. Johnston, Esq., Parry Sound.
T. B. PARDEE,
4l24 Commissioner

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The Strength of Wood.

At the late fair of the Massachusetts Charitable Mechanics' Association, held at Boston, there were exhibited interesting tests of constructive material, among these, of pine columns, which had, in some instances, supported remarkable pressure. One of these columns, originally twelve feet long, yielded to a pressure of 190,000 pounds; the weak spot being a large knot, which acted as a wedge, and caused the destruction of the column at less than the proper figures for a sound piece. Another column was twelve feet long, and tapering from seven and three-fourths to six and a half inches in diameter. This stick showed its weakest point at the smaller end, the crumbling of the fibres taking place in that part. A seasoned hard pine girder, eleven inches square and ten feet long, bore the astonishing load of 751,000 pounds.—*Northwestern Lumberman.*

How to Use Oil Stones.

Instead of oil, which thickens and makes the stones dirty, a mixture of glycerine and alcohol is used by many. The proportions of the mixture vary according to the instrument operated upon. An article with a large surface—a razor, for instance—sharpens best with a limpid liquid, as three parts of glycerine to one of alcohol. For a graving tool, the cutting surface of which is very small, as is also the pressure exercised on the stone in sharpening, it is necessary to employ glycerine almost pure, with but two or three drops of alcohol.

A WORLD OF GOOD.—One of the most popular medicines now before the American public is Hop Bitters. You see it everywhere. People take it with good effect. It builds them up. It is not as pleasant to the taste as some other Bitters, as it is not a whiskey drink. It is more like the old fashioned bone set tea that has done a world of good, If you don't feel just right try Hop Bitters.—*Nunda News.*

A POPULAR REMEDY.—Hagyard's Pectoral Balsam is one of the most deservedly popular remedies for the cure of cough, croup, bronchitis, and all pulmonary complaints. For sale by all dealers.

People have no more right to become dyspeptic, and remain gloomy and miserable, than they have to take poison and commit suicide. If the stomach becomes weak and fails to perform its functions, Burdock Blood Bitters will speedily remedy the trouble.

WHAT EVERY ONE SAYS MUST BE TRUE.—And every one who has tested its merits speaks warmly in praise of Hagyard's Pectoral Balsam as a positive cure for all throat and lung complaints, coughs and colds, sore throat, bronchitis and incipient consumption.

A REAL NECESSITY.—No house should be without a bottle of Hagyard's Yellow Oil, in case of accident. There is no preparation offered to suffering humanity that has made so many permanent cures, or relieved so much pain and misery. It is called by some the Good Samaritan, by others the Cure-all, and by the afflicted an Angel of Mercy.

NO IMPOSSIBILITY.—People often say, when suffering in the first stages of Consumption, or suffering from lung disease, if their physician fails to effect a cure, "my case is a hopeless one, and my enjoyment of health again is an impossibility." The celebrated French Count Mirabeau's nasty temper is well known. "Monsieur le Comte" said his secretary to him one day, "the thing you require is impossible." "Impossible!" exclaimed Mirabeau, starting from his chair, "never again use that foolish word in my presence." It is well-known that N. H. Downs' Vegetable Balsamic Elixir has brought to health and strength thousands who were told by doctors that their recovery was impossible. Be not deceived by any apparent impossibilities; always use the Elixir.

CANADIAN PACIFIC RAILWAY.

Emory's Bar to Port Moody.

NOTICE TO CONTRACTORS.

Tender for Work in British Columbia.

SEALED TENDERS will be received by the undersigned up to NOON on WEDNESDAY, the 1st day of FEBRUARY next, in a lump sum, for the construction of that portion of the road between Port Moody and the West-end of Contract 60, near Emory's Bar, a distance of about 85 miles.

Specifications, conditions of contract and forms of tender may be obtained on application at the Canadian Pacific Railway Office, in New Westminister, and at the Chief Engineer's Office at Ottawa, after 1st January next, at which time plans and profiles will be open for inspection at the latter office.

This timely notice is given with a view to giving Contractors an opportunity of visiting and examining the grounds during the fine season and before the winter sets in.

Mr. Marcus Smith, who is in charge at the office at New Westminister, is instructed to give Contractors all the information in his power.

No tender will be entertained unless on one of the printed forms, addressed to F. Braun, Esq., Sec. Dept. of Railways and Canals, and marked "Tender for C. P. R."

F. BRAUN,
Secretary.

Dept. of Railways and Canals, Ottawa, Oct. 24th, 1881.

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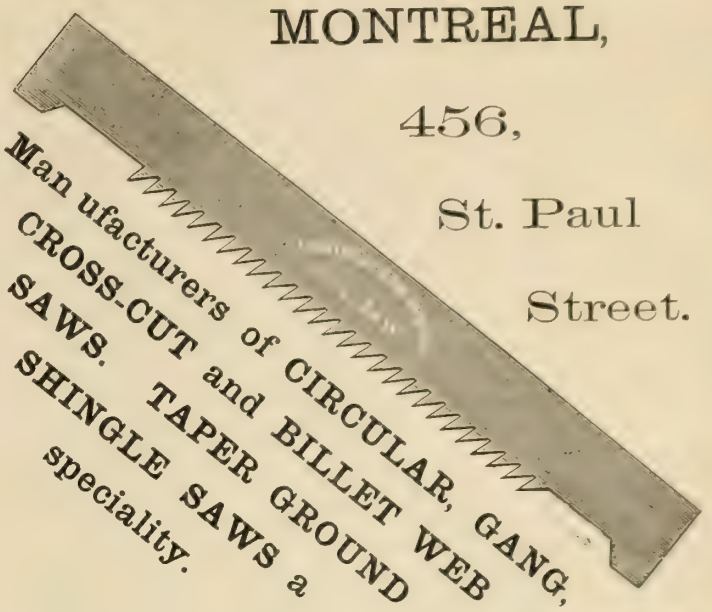

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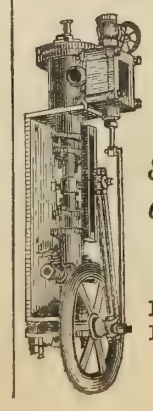

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St. Paul St., QUEBEC.

FIRES IN OUR PINE FOREST.

10,000,000 WORTH OR MORE OF PINE DESTROYED THIS YEAR IN ONTARIO.

Not for many years has fire made such havoc among the pine forests of the country. The extent of these fires is, however, not known, and cannot be approximately ascertained until the agents and bush rangers in the employ of the Ontario Government make reports upon the subject. It is known that thousands of square miles of territory have been burned over along the Ottawa, in the back townships north of Lake Ontario, and through Muskoka and Parry Sound. Much of this burnt land has consisted of farms, woods from which the pine has been stripped, and pine areas previously destroyed by fire.

THE LOSS BY LAST SEASON'S FIRES.

Of the very great destruction which must have occurred throughout the whole unsettled territory lying along the eastern borders of Parry Sound and Muskoka, and thence eastward to the townships along the Ottawa, little or nothing is known. Estimate has been made of the loss in the Ottawa Valley, and it is placed by some at $5,000,000. In Muskoka, and Parry Sound great belts, twenty miles or more in length, and from one mile to five or six miles wide, have been burned over; and according to one gentleman, well acquainted with the districts, the smoke of bush fires has ascended from almost every square mile of territory from Lake Nipissing to the Severn. The magnitude of the loss must therefore have been great, and not improbably quite equal to that along the Ottawa. Yet some almost place it as low as one million dollars. That figure may not be too small on the lowest calculation of the value of the uncut trees to the lumbering companies. But the actual value may be four or five times as much. Along the north shore of Lake Huron the damage from fire has not been so great as it was supposed to be during the prevalence of the fires, but this may apply only to the narrow strip of territory traversed in summer by lumbermen and others. The total loss over the whole Province may be variously estimated at from ten to fifteen million dollars.

CUTTING DEAD TREES.

Much may yet be saved by prompt cutting of the scorched timber, and most of the trees in the burned districts are merely scorched. If these trees be cut down this winter the borer, which invariably attacks dead trees in the summer season, can do no harm, and they will be suitable for lumber, but otherwise the timber will be rendered useless. The cutting of these trees, situated in many instances where access and removal are difficult, can not be expected, so that nearly every one of the few hundred thousand pine trees burned, more or less, last summer, may be considered a total loss.

THE ANNUAL LOSS BY FIRE.

The average annual loss by fire cannot well be estimated even approximately, and if one million dollars be roughly stated as an amount more probable than anything lower, the figures large as they are, can scarcely be considered too high. The surveys of the new townships of Bonfield and Boulter, of which notice has been taken in the *Globe*, reveal an aspect of the forest lands which is common almost everywhere from the Georgian Bay to the Ottawa. Two-thirds of Bonfield has been burned over at one time and another within recent years, while Boulton has suffered from the sweeping away of one-third of its forest. The same story is told of all other parts of the pine country by the surveyors who have traversed them. Much of this destruction has been done where the lumberman and the trapper were, till recently, the only human beings who traversed the wilds. When the pioneer settler entered the danger increasd, and the pine has only an even chance of survival till the lumbermen can turn it to commercial account.

EXTINCTION OF THE LUMBER TRADE THREATENED.

Settlements have now been formed in most parts of the pine country, and for twenty years at the present rate of progress there will scarcely be the area of a township left unpenetrated by the hardy pioneer. Twenty years later the lumber business may be a thing of the past, so far as Ontario is concerned, unless an efficient system be adopted of protecting the forests. Already only the limited tract along the west side of the Ottawa from Mattawan to Lake Temiscamingue, the wilderness, rapidly diminishing in area, that lies between the county of Peterborough and Lake Nipissing, and a portion of the north shore district are yet unbroken by settlement. Half, perhaps much less than half, of the area contains no pine of commercial value; so that under the present system of waste, not only may an important source of Government revenue be greatly diminished within a decade or two, but one of the leading industries of the country will be crippled in its competition with districts more favoured by abundance and easy access. The replanting of trees can do little to remedy the mischief, as one hundred and fifty years are required, so it is said, for a pine to reach maturity. That length of time being necessary to produce good marketable timber, it will be seen, if viewed in connection with the progress of settlement and the increasing demand for lumber, that less than one per cent. of our forest trees can be allowed to be cut down or burned if the province hopes to preserve a permanent lumber industry and a Government revenue therefrom.

PROTECTION AGAINST FIRE.

In 1878 the Ontario Legislature introduced better regulations than theretofore had been in use for the prevention of forest fires. The fire district of Ontario, as constituted by the Act, includes a large area; the boundary in the southern part extends from Bruce Mines along the north shore and the Georgian Bay to Midland, then across Lake Couchiching to thirty miles north of Kingston, where it turns northward to Allumette Island, and follows the course of the Ottawa to Lake Temiscamingue. In this district fires are placed under considerable legal restriction. No fire is to be kindled in or within half a mile from the woods, between the 1st of April and 1st of November, except for clearing land, cooking, obtaining warmth, or some industrial purpose. In building any such fires a locality is to be selected where there is the smallest quantity of vegetable matter, dead wood, branches, brushwood, dry leaves, or resinous trees. The place where the fire is to be lighted is then to be cleared of all dead vegetation for a space of ten feet around, and every care is to be taken to prevent the fire from spreading, and it must be extinguished by the parties kindling it before they leave the spot. The pains and penalties of the Act lie on the head and pocket of him who throws or drops a burning match, the ashes, of a pipe or a lighted cigar in this sixty thousand-square-mile-tinder-box. The wadding of a firearm must also be looked after or the law will pounce down on the neglectful sportsman.

CAMPING PARTIES.

One section of the Act bears severely on some of the parties who leave Toronto and other towns for an outing near the northern waters. Whether such parties consist of one or more persons they must have a recognized head, if for no other purpose than the purposes of this Act. Such head must carry a copy of the Act with him among his other baggage, and once a week must call his men together and read the Act aloud in their hearing, and also explain it to them. If a man go out alone, it is presumed that he will call himself together and read the Act aloud—a wise provision of the law for the evolution of lawyers, clergymen and stump orators. It would be interesting to know how many pleasure parties have observed this section and escaped liability to the penalty of $50 and costs, or three months in gaol imposed for its violation.

An important section refers to the locomotive engines passing through the fire district. Such engines must have all the most approved and efficient means of preventing the escape of fire from the furnace or ash-pan, and the smoke stack is to be provided with a bonnet or screen of iron or steel wire netting, containing in each square inch eleven wires each way at right angles to each other. The duty of seeing that these appliances are used is especially given to the driver of the locomotive. The penalty for contravention of the Act is fifty dollars and costs of prosecution, and in the case of railway companies one hundred dollars and costs for each offence; this latter penalty to be recovered by suit in any court of competent jurisdiction. Every suit for recovery of a penalty must be commenced within three months after the contravention complained of.

THE LAW A DEAD LETTER.

As every one acquainted with the forest territory knows, this Act is almost a dead letter. The reason is that practically no one is responsible for its reinforcement. Successful prosecution of a suit entitles the complainant or prosecutor to one-half of the fine and costs, and while any person can appear as prosecutor, the duty is said to attach specially to Crown Land Agents, Woods and Forest Agents, Free Grant Agents, and bush-rangers. These men are unlikely to incur the odium of instituting a prosecution which may bring them a direct pecuniary benefit. The same thing has been tried in the liquor law and found wanting. The difficulty is increased by another cause. In these sparsely settled districts it is not easy to discover the offender in one case out of a dozen, for the Government agents are not numerous, while the bush-rangers, whose duties are the measurement of the ties cut by the lumberers, neccssarily do their work in the winter, and in summer attend to private business.

A MORE EFFICIENT LAW REQUIRED.

The remedy may partly lie in investing Crown Land or Free Grant agents with power on dry seasons to prohibit the kindling of clearing fires, and at all times in the summer months to require every party about to start a fire to first obtain written permission. Bush rangers should be more numerous, and their special duty in summer should be to constantly scour their districts in search of fires. In this way every party camping out would be known to the rangers, and it would be comparatively easy to fix any contravention of the Act on the right parties.

The regulation regarding locomotives might be made to apply throughout the whole Province, for the past season's record shows that some of the most destructive fires occurred beyond the fire district, and were caused by sparks from passing engines.

The hope is expressed that the Government will instruct its agents to make full reports of the extent of the damage done by fires during the past season, and the causes, as far as can be ascertained, of each fire.—*Globe.*

THE GREAT FOREST FIRE.

A DISTRESSING TALE FROM THE BURNT MICHIGAN DISTRICT BY A FORMER PETERBOROUGH MAN.

The following letter appeared in the Peterborough REVIEW:—

DEAR SIR,—Having received a number of communications from old friends from Peterborough and other localities since the fire of September 5th, in regard to our welfare and the particulars in regard to the fire, and as the impression is quite general that we were burned up, allow me through the columns of your paper to state that such is not the case. Myself and family were all burnt more or less, but thanks to the Great Ruler of the Uuiverse, our lives were saved, while others all around us perished in the flames, every thing that we had was consumed, not one dollars worth was saved except what we had on our persons and even that was torn from our backs to save us from burning. We sought refuge in a corn-field and remained there from 1 until 6 o'clock p.m., with the air so heated and the smoke so dense that breathing was very difficult. Our only relief was lying with our faces on the ground and covering ourselves with the grain stocks. Let me here state that there are hundreds of people in the burned district to-day that are losing their hair by reason of the extreme heat. At times it was as dark as night, and the darkness was the cause of many deaths, as the people could not see the way to escape from the flames. The fire reached my place about 1 o'clock, and was one broad extended sheet of flame as far as the eye could reach, and as it was blowing a gale at the time, it travelled a distance of twenty one miles in less that one hour and swept everything before it, leaving death and destitution in its wake. There were thousands of acres of land upon which it did not leave a living thing of any kind, not even one splint of grass. Mr. editor, could you have travelled over that space of ground on the following day, you would have witnessed some of the most heartrending scenes that it is possible for the eye to behold. Whole families clustered together, some burned to a cinder and others partially burned, writhing and groaning in their agony, crying and begging for death, when death alone was the only relief possible for them. Such my friends were some of the scenes witnessed by those that were so fortunate as to save their lives, and which has left an impression upon their minds that time will never efface. As regards our present welfare I may say that we have "thanks to the good people of our land" enough to eat and clothes enough to wear at present. The great trouble will be to get feed for our horses, as there is not any in the country and it will have to be shipped from a distance and in all probability many will perish for want of it. By inserting the above you will confer a great favor.

I remain yours &c.

HENRY LAWSON.

Bad Axe, Michigan, Nov. 7th, 1881.

THE FORESTRY WORK OF THE TENTH CENSUS.

Up to the present time there has been but a vague conception of the extent and value of one of the most important sources of the prosperity of the United States. It seems the more strange when it is considered that this great item in the nation's assets is not buried in the earth, like its mineral wealth, but stands proudly on the surface, like a mighty host, seen of all men. The entire welfare of a country is more identified with the forests that cover it than with any other feature of the earth's surface. The trees are the kindest friends of the soil; they are the guardians of its fertility; they protect the fields from devastating floods, and cherish the springs that feed the streams. Without them the land becomes an arid desert, and its people are debased to barbarism and poverty. Great desolated tracts in Asia, Africa and along the eastern Mediterranean were once blooming and garden like, but when the trees were cut away the dryads avenged themselves. Therefore it is fitting that in the grand taking account of stock in the national storehouse that occurs every decade, the forest wealth of the country should at last be accorded its proper place.

Although the statistics concerning the forests of most of the European countries are generally full and accurate, the institution of the forestry division of the 10th census of the United States forms the first attempt to obtain such information by means of the census work of any country. In laying out the work of his bureau, Gen. Francis A. Walker, the superintendent of the census, decided to undertake an investigation into the extent of the forest covering of the country as related to agriculture; into the forest wealth as related to manufacture, to railway transportation, and to the domestic supply of fuel; and into the operations of the lumbering industry as pursued in the principal districts of cutting and export. The scope of the investigation comprises the chief characteristics of the forest flora of each section of the country, an account of the various woods in the adaption to industrial and domestic uses, and the methods in vogue in the various parts of the country for the protection or restoration of the forest growth.—*Sylvester Baxter in November Atlantic.*

A Long Trestle.

The Chattanooga *Times* says:—Fletcher Wessenberg & Co. have been awarded the contract for building a trestle across Lake Pontchartrain and approaches. The trestle will be twenty-five miles long, and the contractors bind themselves to finish it in one year.

The contract is the largest timber contract ever before awarded in the south. It will amount to at least 1,250,000. Thirty million feet of lumber and seventy-five car loads of bolts, 1,500,000 pounds will be used in building this trestle. All timbers which will go in water will be creosoted; creosote works will be erected at once near the lake at a cost of $75,000.

The works are on the line of the New Orleans and North-Eastern railway, the extension of the Vicksburg and Meridian railway to New Orleans. The rest of the work is now under contract, as well as the road from Monroe to Shreveport, and is to be finished within a year, at which time the Erlanger system, extending from Cincinnati to Shreveport and New Orleans will be intact.

SOME FAMOUS TREES.

A poplar tree in Waukesha, Wis., is attracting attention by its being completely covered with small insects resembling caterpillars. In some places they are two inches thick.

In the old Rogers burying ground near Chatham, N. C., an oak tree has grown on a grave in which a person was buried seventy-five years ago, and the tree is now five feet in diameter.

In Lewis County, Ky., a mammoth tree was recently cut that is believed to have been 300 years old. It was 16 feet in diameter, 190 feet high, and yield 33.452 feet of lumber and 25 cords of wood.

In the village of Noebditz, Saxony, is an oak whose aged and infirm branches are propped up all around by beams. Its trunk has been used many years as a burial vault. Its lower part, which measured 14 ells in circumference, is hollow, and the aperture to this great cave is closed by lattice work of iron bars. Through this sort of window the unsuspecting stranger who is first led to take a peep perceives with amazement the skeleton of a man seated in the middle of the hollow. It is the skeleton of the Lord of Wintersheim, who died about a century ago, and whose choice of this singular mode of sepulture is very minutely described by the inevitable guide who shows the place.

A correspondent of the San Francisco *Examinev*, in speaking of the big trees of Calaveras County, says :—"In the stump of one of these trees a ball-room thirty-three feet across is built, ane it requires a ladder eighteen steps to ascend to the top of the log, on which was built a ten-pin alley. It has been burned up, but the old, charred monarch of the forest still remains. Think of it—a hollow log, through which one can ride on horseback 100 feet and come out through a knot hole! There are some ninety of these big trees measuring from 50 to 100 feet in circumference, and reaching up the skies—from the rings that denote the annual growth of these trees, science has estimated some of them to be 4,000 years old, while they stand over the fallen bodies of much older growth, covered over with earth and large growing trees, as it is one of the peculiarities of this timber not to decay. It appears to be a species of redwood.

Mississippi River Reservoirs.

The plan of providing reservoirs near the headwaters of the Mississippi river, as a source of supply in seasons when the river is at a low stage, has for a long time been in contemplation. It is now likely to be practically tested. Congress in 1880 made an appropriation of $75,000 for a dam at Lake Winnebigoshish, and last spring made an additional appropriation of $150,000 for the same purpose. The enterprise for some months was halted because Congress failed to provide means for estimating the amount of damage to lands that the overflow would cause; but that matter has now been overcome by an ordinary appraisement, and the work is likely to go on, and the dam at Winnebigoshish will be constructed at an early day. It is not expected that this one structure will have any appreciable effect upon the water in the Mississippi river. But it will solve certain problems in practical engineering, and the extent to which it may be made to control the water passing through it, will be looked upon as a test of the efficiency of the general system. If the work about to be constructed prove a success, as there seems no good reason to doubt, a few more years will bring the extension of the system over enough of the territory near the river's source to graduate the amount of water in its channel, and with a corresponding improvement of the channel, assure the long-wished for navigation by large boats through the whole of the open season.—*Northwestern Lumberman*.

Belts.

Leather belts will last double the usual time if treated with castor oil; they will be rat proof, they will always remain flexible, and will not crack. A belt four inches wide will be equal to one six inches wide which has not been oiled. It requires twenty-four hours to penetrate the leather. If used sooner the greasiness will make the belt slip.

PARQUETRY FLOORING.

The demand for parquetry floors is continually on the increase. They take the place of carpets for covering the coarse boards of ordinary flooring, and are made by ingeniously mortising together different kinds of wood. Most of this flooring is made seven-eights of an inch thick, and what is known as "wood carpet" is made only about one-fourth of an inch in thickness. The principal body of parquetry work is oak, in different shades, but every kind of cabinet wood is used— mahogany, tulip, walnut, cherry—all furnishing a variety of shades, which when properly set, harmonize with agreeable effect, The entire mosaic, when mortised and joined, can be lifted without injury.

Nothing neater and more refined can be found for a floor covering to a room than a center rug or carpet, either in the shape of a square or parallelogram, and surrounded on all sides by a neat pattern in wood. If one wishes to practice closer economy he can cover the space occupied by the carpet, the piano, stages, or other large pieces, with plain wood the thickness of the parquetry wood. The surface polish of the wood must be maintained to retain the beauty and finish of the floor. Waxing is often sufficient, or a vigorous application of shellack varnish.

The origin of this style of flooring can be traced back to the early history of western Asia. The material used was usually marble. From those early days to the present changes have taken place. Wood has succeeded stone, and the jig-saw the chisel. For some time past, paraquet work has been successfully used in Germany, France and lately in England; and in this country, although new at present, we predict for it great popularity. In our American homes parquet flooring is particularly adapted for backgrounds to rugs or square carpets.

Next Winter's Operations.

A correspondent of the *Globe* gives the following estimate of the probable cut of logs in the Georgian Bay district, during the season upon which we are entering, viz. :—

	Square ft.
Penetanguishene Mills	26,000,000
British Canadian Lumber Co.	25,000,000
Other mills at Midland Bay	14,000,000
Georgian Bay Lumber Co.	35,000,000
Parry Sound Lumber Co.	20,000,000
Guelph Lumber Co., Parry Sound	15,000,000
Maganetawan Lumber Co.	30,000,000
Muskoka Lumber Co.	25,000,000
Victoria Harbour	15,000,000
Collingwood Lumber Co.	10,000,000
North Shore Mills	20,000,000
Mills along Victoria Railway, not included above	70,000,000
Mills along Midland Railway, not included	120,000,000
Other Mills	14,000,000
Total	434,000,000

Humbugged Again.—I saw so much said about the merits of Hop Bitters, and my wife who was always doctoring, and never well, teased me so urgently to get her some I concluded to be humbugged again; and I am glad I did, for in less than two months' use of the Bitters my wife was cured and has remained so for eighteen months since. I like such humbugging.—H. T., St. Paul.—*Pioneer Press.*

The Saddest of Sad Sights—the grey hairs of age being brought with sorrow to the grave is now, we are glad to think, becoming rarer every year as the use of Cingalese Hair Restorer becomes more general. By its use the scanty locks of age once more resume their former color, and the hair becomes thick and luxuriant as ever; with its aid we can now defy the change of years, resting assured that no Grey Hair at any rate will come to sadden us. 50 cents per bottle.

Honesty.—It is commonly said that you cannot make an honest man believe that white is black and *vice versa*, but those who have grey hair by using the "Cingalese Hair Renewer," will find that this apparent difficulty is easily overcome. 50 cents per bottle.

Dyspepsia, that all prevalent disease of civilized life, is always attended with a disordered sympathetic system and bag secretions, and no remedy is better adapted to its cure than Burdock Blood Bitters taken according to the special directions found on every bottle.

Gray spent seven years in perfecting his "Elegy," but the time required to get a box of Esterbrook's Steel Pens is just long enough to send to the nearest stationer. Wholesale by Brown Bros., Toronto.

Respect.—The Grey Hairs of old age demand and should receive respect—but the Grey Hairs of young people require attention—in the way of using Cingalese Hair Renewer. 50 cents per bottle.

E. S. VINDIN,
Commission, Shipping, Forwarding and General Agent.
LUMBER MERCHANT
Office, Tempest's Block, Port Hope. L11

Caledonian Hotel,
GRAVENHURST.
JOHN SHARPE, Proprietor. This Hotel has been newly opened out, pleasantly situated on Main Street, within five minutes walk of Northern Railway station. Bar kept with best assorted Wines, Liquors and Cigars. Every attention paid to guests. Good Stabling. 1yL15

Simcoe House,
CORNER FRONT and SIMCOE STS.
TORONTO, ONT.
Best accommodation in the City. TERMS $1.50 and $1.00 per day, according to Location of Rooms.
24L26 WILLIAM HANCOCK, Proprietor.

The American Hotel,
BARRIE, ONT.
Collier Street, Adjoining the Market.
RATES REASONABLE, CENTRAL LOCATION, FREE BUS TO AND FROM ALL TRAINS.
Every accommodation for Commercial and LUMBERMEN.
L14 W. D. McDONALD, Proprietor.

FRANCOIS MARCHAND,
Manufacturer of all Descriptions of
STEAM BOILERS,
SHIPS WATER TANKS, Etc.
St. Roch Street, 12L24 QUEBEC, P. Q.

CANADA TRUSS FACTORY
(ESTABLISHED 1856.)
F. GROSS,
Manufacturer of SURGICAL and ORTHOPŒDICAL INSTRUMENTS. ARTIFICIAL LIMBS made to order. INDIA RUBBER GOODS of every description. L19-1y
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Adjustable Saw Guide!
Can be adjusted without danger. You can take your saw off without taking the guide off the frame.
All kinds of Brass & Iron Casting
PLAINING and TURNING done with Despatch. For particulars address :
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SEND FOR CIRCULAR.
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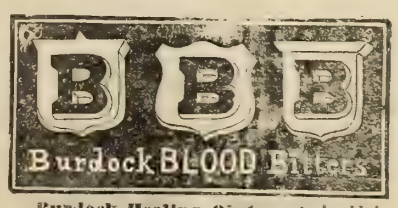

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With Steel Head, either Cleveland or London make, at $1.75 Each.
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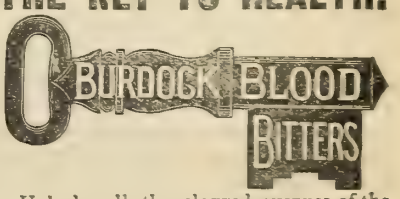
HARDWARE MERCHANT,
LINDSAY.
BELTING, FILES, BABBIT METAL,
1y CHAINS, ROPE, and L17
LUMBERING SUPPLIES.

WANTED.
Cherry, White Ash, Black Ash, and Dry White Pine Lumber.
Quote Price delivered, and Carefully Describe:—Quality, Widths, Length, Thickness, and how long Sawed.
ROBERT C. LOWRY,
Wholesale Lumber,
12L19 55 Pine Street, New York.

SAMUEL WINDRIM,
MANUFACTURER OF
Agricultural Implements, Etc
MILLBROOK, ONTARIO.
HAVING DISPENSED WITH THE SERVICES OF AGENTS, I take this opportunity to bring to the notice of intending purchasers of Reaping Machines, that I have now on hand a quantity of the Celebrated
HANLAN REAPER,
which has NEVER BEEN BEATEN YET, and am prepared to allow the Agents commission—FIFTEEN PER CENT—on all purchases. L17tf

WISDOM & FISH
IMPORTERS AND DEALERS IN
Rubber and Leather Belting
RUBBER HOSE, STEAM PACKING,
LUBRICATING OILS, COTTON WASTE
Wrought Iron Pipe and Fittings,
And all Articles used in the Application of Steam to Machinery.
No. 41 Dock Street, St. John, N. B.
(SMALL'S BLOCK.)
N.B.—Estimates for Steam and Hot Water Heating Apparatus furnished on application. All work Warranted. 1y-L20

THE KEY TO HEALTH.


Unlocks all the clogged avenues of the Bowels, Kidneys and Liver, carrying off gradually without weakening the system, all the impurities and foul humors of the secretions; at the same time Correcting Acidity of the Stomach, curing Biliousness, Dyspepsia, Headaches, Dizziness, Heartburn, Constipation, Dryness of the Skin, Dropsy, Dimness of Vision, Jaundice, Salt Rheum, Erysipelas, Scrofula, Fluttering of the Heart, Nervousness and General Debility; all these and many other similar Complaints yield to the happy influence of BURDOCK BLOOD BITTERS.
Sample Bottles 10c; Regular size $1.
For sale by all dealers.
T. MILBURN & CO., Proprietors, Toronto

Travelling Agent.

MR. A. L. W. BEGG has been appointed agent for the CANADA LUMBERMAN, and is authorized to collect subscriptions and grant receipts therefor and to make contracts for advertisements appearing in its columns.

DEVOTED TO THE LUMBER AND TIMBER INTERESTS OF THE DOMINION.

PUBLISHED SEMI-MONTHLY BY

TOKER & Co. PETERBOROUGH.

Terms of Subscription :

One copy, one year, in advance	$2 00
One copy, six months, in advance	1 00

Advertising Rates :

Per line, for one year	$0 90
Per line, for six months	50
Per line, for three months	30
Per line, for first insertion	10
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Cards not occupying more than 12 lines (1 inch) per annum	8 00
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Special rates will be made for page, half page and column advertisements.

Advertisements intended for insertion in any particular issue should reach the office of publication at least three clear days before the day of publication, to insure insertion.

All communications, orders and remittances should be addressed and made payable to TOKER & Co., Peterborough, Ont.

Communications intended for insertion in the CANADA LUMBERMAN, must be accompanied by the name of the writer, not necessarily for publication, but as a guarantee of good faith. Communications to insure insertion (if accepted) in the following number, should be in the hands of the publishers a week before the date of the next issue.

PETERBOROUGH, Ont. DEC. 1, 1881.

A PROPOSITION has been made to establish a woodenware factory in Lindsay.

THE Medonte Lumber Company have made preparations for getting out 4,000,000 feet of pine this winter, in addition to a large quantity of oak, elm, basswood, and black birch.

WE would direct the attention of consumers of hardwood lumber to the advertisement of the Medonte Lumber Co., and the manufacturers of the same article to the advertisement of the Kingston Locomotive Works, both of which will be found in another column.

A LOG 30 feet long and 57 inches in diameter was sawed into inch planks at the Seattle Lumber and Commercial Co.'s mill. Some wide planks were needed for the Reinig-Voss building, and this log was used to fill the special order. The stick scaled 4,563 feet, and probably contained 5,000 feet of lumber.

THE Hon. Mr. Joly, in a recent election speech at Montreal, said:—"Mr. Chapleau endeavored to show that the Province was in a prosperous state, and as a means of establishing that position he spoke of the $700,000 received from Crown lands as legitimate revenue which they had a right to depend upon. This was not so. It took a pine tree 400 or 500 years to grow, and the money realized by the sale of timber from the Crown lands was their capital, and not a revenue upon which they could depend."

THE Toronto *Globe* says that the Kingston and Pembroke road will yet have a large lumber traffic, probably sooner than it would otherwise have enjoyed on account of the persistence of Mr. Peter McLaren in obstructing the log navigation of the Mississippi. The limits of the Messrs. Caldwell lie far up the river from the railway crossing, and it is, I believe, their intention to erect a mill near the latter point, thus saving many miles of stream driving, and getting rid of a portion of the disputed river. Mr. McLaren has a mill already in operation near the same place.

IT is stated from Alpena, Mich., that there will not probably be quite as many logs cut this year as last. There will be a large amount of last winter's cut left over. The mills have not cut as much as was intended in the spring. The breaking of Richardson's dam, in the beginning of the season, was a serious detriment to business, a full month's work in most of the mills being lost by it; besides, it disarranged the operations of the boom company to such an extent as to be an embarrassment the entire season, and mills have often been obliged to shut down temporarily because of it.

A SPECIAL telegram from Ottawa says that a well known forwarder, in speaking of matters pertaining to the forwarding business, says that while the same rates had been obtained during the season now practically closed, as in 1880, wages had advanced fully 20 per cent., and there was a decrease to fully that extent in the carrying capacity of the barges, owing to the low state of the water. He considered the outlook for 1882 very favorable, as more lumber will be cut, and as the construction of the dam at the Chute au Blondeau, the only really dangerous piece of navigation between here and Montreal, would greatly benefit the forwarders, doing away with the delays which have hitherto proved so serious. He thought the dam had proved a success beyond all question, and that now even the largest steamship could ascend the Chute without trouble or danger.

AN UNKNOWN FOREST.

MR. NIVEN' EXPLORATIONS OF THE TAMAGAMANGUE COUNTRY—LOTS OF GOOD PINE.

Mr. A. Niven, P. L. S., of Haliburton, has just returned from making a survey of the country between Lakes Nipissing and Tamagamangue. The survey was made under the direction of the Ontario Government, and is merely preliminary to the laying out of a large block of townships, the base lines for which were laid down in this survey. A *Globe* reporter called upon Mr. Niven and gleaned much interesting information respecting the district, which hitherto has been almost unknown. Mr. Niven, with a party of thirteen men, set out from Lake Nipissing in the middle of June. The party penetrated to the north-east corner of the Township of Field, where the survey was to commence.

Here four months of laborious journeying commenced, almost every step having to be

CUT THROUGH A DENSE FOREST.

The first line was cut from the northeast angle of Field due northward eighteen miles nearly to the southern shore of Lake Tamagamangue. Along this line the country is undulating, and rocky ridges with an occasional swamp appear. The swamps, however, are only of small extent, and the ridges are rarely sharp, or show exposures of bare rock. In fact they are more like plateaus, and are densely wooded with pine, birch, poplar, etc. The pine is abundant and of excellent quality, being quite equal to any Mr. Niven has seen elsewhere in Canada. The soil is a sandy loam except where it is rocky. Returning twelve miles southward, Mr. Niven struck twelve miles eastward, finding a comparatively level country, similar in vegetation to the country on the north line. Maple is also present. On this line the soil is in parts excellent, and fully a third of it good arable land. The pine is good. Returning to the north and south line, the party then cut their way due west twenty-five miles. For the first twelve miles the surface is much like that already described, and good timber abounds.

AT THE STURGEON RIVER,

which flows into Lake Nipissing, the soil is clayey and the timber good—very fine pine trees appearing. In this neighbourhood Mr. Niven saw the only great damage done by the fires of the past summer. This was a *brule* two miles wide and ten long. The trees were all, or nearly all killed, but were not burnt down. Burning down rarely occurs in the first fire which sweeps over a country. This fire took place in May, and originated in a fire kindled by a camping party at a portage. The roughness of the country gradually increases westward towards Sturgeon River, but good land and timber is found in large areas along the route. Westward of the Sturgeon the party entered a *brule*, or

TRACT OF BURNT FOREST.

The conflagration which swept over it occurred six years ago, and was extensive. At one time, Mr. Niven says, the *brule* was to be seen six miles on every side of him. The spectacle was a strange one. The tall pine trees still stood rearing their blackened forms over a hundred feet into the air, and stretching out their withered limbs in ghastly malediction over the foliage, which but for them would form a vast lake of verdure. Where the pine trunk was not, there the underbrush was. This dense underbrush consisted of a young growth of poplar, birch and cherry, ten or twelve feet high. Here and there over the top of the swarthy trees rose the bare cliffs or barren hillsides of the Laurentian formation, but down in the flats the surveyors travelled for hours without seeing more than a yard or two ahead. Beneath the tangle of underbrush, through which the axe had to cut a way, stretched in every direction the decaying forms of forest giants. In this desolation the twenty-five mile westerly line was completed, and the party turned northward for twelve miles, sketching the east shore of what is marked on the map as a fifteen mile long lake, but which is in reality a chain of three lakes, one of which—the smallest—bears the euphonious name Ahpetagekickagung, and the others Wahnapachicitegoganchanungue and Olopangishgamacookicongue, or some names equally unintelligible. Till within the last four miles of this northerly line the route was through a *brule*. Then came a fine piece of country, well timbered with maple, birch, balsam and spruce. From this point Mr. Niven, about the middle of September, turned eastward, on the sixty mile line leading to the Ottawa. The first four miles were like those just traversed, and much of it well adapted to agriculture. Then came

THE STURGEON RIVER.

This stream is a fine one. Its lower course is impeded by several falls, but the part lying in Mr. Niven's survey is obstructed only by rapids. It flows through a comparatively fertile valley, with a current two hundred to three hundred feet wide and fifteen to twenty feet deep. The banks are only ten or twelve feet high and are of quicksand and clay, which mingled, form a broad valley on either side. The banks of the stream are finely timbered with hardwood and pine. Leaving the river the line runs eastward over high plateaus broken by the chain of lakes leading from Lake Tamagamangue to the Sturgeon River. As the South Bay of the Tamagamangue is approached the maple becomes one of the most common of all the trees and the scenery is beautiful. A fine country extends from the South Bay a few miles eastward, where the land becomes high and rolling. Then on to the Tamagamangue River the soil is poor. From this river eastward the timber, soil, and appearance of the country are much like those north of the township of Field, and include, of course, some very good land and excellent pine. Then for fifteen miles the country is comparatively flat and is covered with a thick growth of white birch, spruce, balsaam, popular, and small pine. Swamps and rocky ridges are rather frequent. Good land appears here and there. Then comes a stretch of moderately good land near Ottertail Creek, and extending to within six or seven miles of the Ottawa River. This last stretch includes much excellent pine, but the soil is sandy with large areas of granite rock and *brule*.

LAKE TAMAGAMANGUE.

At South Bay the party stopped for a time to explore Lake Tamagamangue. The lake is of a very irregular form, consisting of a central part 30 miles long by 15 to 20 broad, and three arms. The greatest length of the lake is probably sixty miles. The water is remarkably pure, and abounds in fish. The shores are not high, nor are they on the other hand marshy. The number of islands dotting this lake and forming a labyrinth of channels is surprising. The islands are all wooded, and the scenery is beautiful, and may be compared to that of the Thousand Islands. On one of the islands is the Hudson Bay Post, around which sixteen Indian families are settled. The Indians here, and at Temiscamingue, and on the reserves at Lake Nipissing, are the only ones in this part of the country. Lake Tamagamangue has two outlets—one by a river of that name, flowing southward into the Sturgeon, and the other by a river which expanding into Rabbit Lake, flows north-easterly under the name of the Matabige wan River, a branch of the Ottawa. The Tamagamangue as it leaves the lake is 130 feet wide, and of a fair depth. The other outlet is equally large. It was explored to Montreal River by Mr. Galbraith, one of Mr. Niven's explorers.

SOIL, LUMBER AND MINERALS.

Mr. Niven cannot speak of the south-eastern part of the district, as the lateness of the season prevented the completion of the survey in that part. Along the Sturgeon River the soil is clayey, elsewhere it is sandy loam or rocky. The rock is not so much exposed, nor are the rocky ridges so common as in the country south of Lake Nipissing. About one-third of the surface consists of arable land. There is a large amount of fair-sized pine in the district, and of excellent quality. It is easily reached, streams of considerable volume abounding. There are unmistakable indications of iron in the territory, and Mr. Niven has brought specimens with him.

Mr. Niven visited McLaren's saw mill depot, about two miles south of Lake Temiscamingue. He says that if he hadn't seen it he would not have credited the existence of so fine a farm in this part of the country. There are 260 acres cleared and 100 acres without a stump. The buildings are good and splendid crops of oats and roots are raised. Indian corn is grown. Wheat would be grown, but there is no mill to grind it. The soil is first-class.

As the season was late when the party reached the Ottawa they took canoes to Matawan and thence returned home by road. The region traversed was not known to the white man, and Mr. Niven found that chains of lakes marked in the maps had no existence, and that rivers were marked away from their proper positions. His explorations are, therefore, important as making known for the first time a district almost as little known as Central Australia.

The Variability of Bricks.

A correspondent suggests that the market price of bricks should be rated according to their size, weight, and crushing strength. He instances two lots of brick, sold at the same price per thousand, One lot averaged 2¼ x 3⅜ x 7⅞ inches in size, 5 lbs. 2½ oz. in weight, and broke at 5,490 lb. per square inch. The second lot ran about 2¼ x 4 x 8⅛ inches in size, weighed only 4 lb. 8¼ oz., and broke at 3,610 lb. per square inch. The real values of these two lots of brick were obviously very unequal. As our correspondent says it makes a vast difference to the builder of an arch or pier if he calculates on bricks standing 500 tons to the square foot and gets them half as strong; or if he figures on 4,500 bricks per rod of 306 cubic feet, and if it takes 5,500. He thinks that every brick maker should guarantee a certain size, weight and crushing strength—which they will probably do when (and not before) builders refuse to purchase bricks which fall short of a stipulated standard of size and quality, or make their contracts with the brickmaker or dealer contingent as to price, upon the character of the material delivered.

Southern Woods at the Atlanta Exhibition.

One of the notable exhibits at the Cotton Fair is the fine display of Southern woods, both rough and polished. It includes the sweet gum, a light colored wood, often worked up for coffins; the tupello, a tree that cuts like cheese, but cannot be split, used by the negroes for corks; the famous (and infamous) palmetto; the Spanish bayonet, with stiff blades, sharp as needles, and serrated edges; the swamp cypress, with its pointed excrescences, three feet high, springing from the root; and the curled pine, which takes a grain polish like the curled maple, but infinitely more vivid and beautiful.

The Georgia saw mills—there are eight hundred of them in the State—have sent in some colossal pine logs, one of them a sylvan monarch, straight as a needle, seventy feet long, twenty inches in diameter at the smaller butt, and some four feet thick at the base.—*Scientific American.*

J. F. LAWTON
Alexandria Saw Works
SAINT JOHN, N.B.

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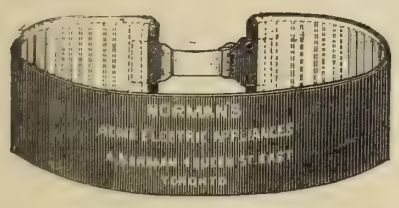

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Dear Sir,—Please send me a waist belt. Enclosed find price. Head band I got for my wife has almost cured her of neuralgia. Yours truly, C. L. TILLEY.

Numerous of such testimonials can be seen at my office, proving that they are doing a good work and worthy the attention of all sufferers. Circulars free. No charge for consultation.

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Whoever you are, whenever you feel that your system needs cleansing, toning or stimulating without *intoxicating*, take **Hop Bitters.**

Thousands die annually from some form of **Kidney** disease that might have been prevented by a timely use of **HopBitters**

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D. I. C. is an absolute and irresistable cure for drunkeness, use of opium, tobacco, or narcotics.

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Vegetable Balsamic

ELIXIR!

This valuable medicine is purely vegetable, the discovery of which was the result of many years' close study, in order to discover the cause, the symptoms and the cure—viz.:

Consumption, Coughs, Colds, Catarrh, Croup, Asthma, Influenza, Pleurisy, Hoarseness, Spitting Blood, Bronchitis,

and every species of oppression of the **Chest and Lungs.** In all cases where this Elixir has been duly administered its efficacy has been invariably manifested, convincing the most incredulous that

CONSUMPTION

is not incurable, if properly attended to.—Consumption, at its commencement, is but a slight irritation of the membrane which covers the lungs; then an inflammation, when the cough is more observable, but rather dry: then becomes local fever and the pulse more frequent, the cheeks flushed and chills more common. This Elixir in curing the above complaints, operates so as to remove all **morbid irritations and inflammation** from the lungs to the surface, and finally expel them from the system. It facilitates expectoration.

IT HEALS THE ULCERATED SURFACES

and relieves the cough and makes the breathing easy. It supports the strength and at the same time reduces the fever. It is free from strong opiate and astringent articles, which are of so drying a nature as to be in great danger of destroying the patient; whereas this medicine never dries or stops the cough, but, by removing the cause, generally destroys the hectic before the cough is entirely gone. Consequently, when the cough is cured the patient is well. Send address for pamphlet giving full directions for cure of pulmonary diseases. Price 25cts. and $1 per bottle. Sold everywhere.

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TIMBER REGULATIONS.

The Winnipeg *Times* says that the recent Order-in-Council regarding the timber regulations has been received at the Crown Timber office. The following are the regulations :—

HOMESTEADER'S FREE PERMIT.

Any occupant of a homestead quarter section having no timber of his own, may, upon application, obtain a permit to cut such quantity of building timber, fencing timber or fuel as he may require for use on his homestead, not exceeding the following :—

1,800 lineal feet of house timber, no log to be over 12 in. at the small end.

400 roof rails.

30 cords of dry wood.

2,000 fence rails.

Should the house timber be sawn at a saw mill, payment for sawing must not be made by way of toll, as the full quantity of lumber cut from the logs must be used on the permit-holder's homestead. In order that mill owners may be able to give satisfactory evidence that saw logs or lumber found in their possession have been lawfully cut, they should require from settlers bringing timber to be sawn, proof that the same has not been cut on Dominion Lands, or that it has been cut under a permit, which the settler should produce in order that its number, date and name of permittee may be noted by the mill owner ; the latter should also record the amount of such timber sawn by him, so that he may be in a position to duly protect himself should account or return thereof be demanded by agents of the Department.

The applicant will require to pay an office fee of 50 cents before he can obtain a permit, but no dues will be charged for the timber or wood cut under and in accordance with it.

Settlers whose farms may have thereon a supply of timber, or who are in possession of wood lots, or other timbered lands, will not be granted a free permit.

PERMITS SUBJECT TO DUES.

Permits under payment of dues may be granted to those applying for them to cut timber on available vacant Dominion Lands, on paying dues at the rates hereinafter specified :—

Cordwood, per cord	$ 25
Fence posts, 8 ft. 6 in. long each	1
Telegraph poles, 22 ft. long each	5
Each lineal foot over 22 ft	1
Railroad ties, 8 ft. long	3
Rails, 12 ft. long, per M	2 00
Stakes, 8 ft. long, per M	2 00
Shingles, per M	60
Square timber and saw logs of oak, elm, ash, or maple, per M B M	3 00
Pine, spruce, tamarac, cedar, and all other woods with the exception of poplar, per M B M	2 50
Poplar, per M B M	2 00

All other products of the forest not enumerated, 10 per cent. ad valorem.

An office fee of 50 cents to be charged for each permit.

Issuers of permits will be instructod by the Minister as to the limit of quantity that will be granted ; also what proportion of dues shall be deposited on issue of permit, as guarantee on the part of those obtaining the same.

Besides the dues above specified, grantees of permits may be called upon to pay such addition thereto as the Minister may judge necessary to meet their proportion of any expense that may be incurred by the Department in survey, or other demarcation, on the ground of the limits within which such permits are to be operative.

Permits shall set forth that those obtaining them must conform to the conditions, terms, and requirements specified in the same, and carefully restrict their cutting to the limits described therein ; and that any breach thereof will subject the offender to all the pains and penalties in that behalf as set forth in the Dominion Lands Act.

WOODEN ARCHITECTURE.

Mr. Chas. Hayward, F. S. A., in an article, Our Old Timber Work," which recently appeared in the *British Architect*, calls attention to the revival of visible timber work construction, after so many years of neglect. "The frequent design and construction of important buildings in timber work," he says, "and the tendency to a further extension of the same, is a remarkable feature of our times. It would seem as if it were a law in our profession, as well as elsewhere, that ideas of art should 'come as the waves come,' and ebb and flow as the tide. It appears more di nified to speak of our changes in taste and practice in this way than to talk of them as mere fashion, though fashion, no doubt, has in its most direct though capricious manner a great influence, not only on the forms of architecture in use at various times, but on the several kinds of materals also, attempts at a 'new style' or a 'new order,' the 'Victorian age,' 'nineteenth century Gothic,' and so on, all showing a healthy, thoughtful vigour existing in the old stock, and a hopefulness ever new for something great to be evolved in the future. When centuries have rolled by, and men begin to reckon up the works of the nineteenth century and twentieth century architects, perhaps they may find that 'something' which we are now unconsciously striving after, and haply helping to accomplish, though we cannot see it.

"Some years ago there was for a little while a fashion to talk of importing timber houses from Norway, designed and constructed all complete, and one or two were actually brought over in sections and set up. At the same time the writer was building, he says, a timber house in Norway, which was actually carried out in a modified form. Curiously it happened that a little later he was called upon to build a mansion of old ship timber in Cornwall, and a Swiss cottage, entirely of wood, elsewhere. The study of some foreign books, as well as of all such home and foreign timber constructions, becames specially interesting, and he would now recommend it to those who may be enabled by the present wave of fashion to evolve something out of the style in favour for the time."

The writer concludes as follows :—"We all know the glorious examples of Cheshire, Shropshire, Worcestershire, &c., besides the smaller excellent examples to be found nearly everywhere in the country about us. But I would point to one of our very earliest constructions in wood—well known, and yet, I dare say, seldom remembered—as the very fountain-head of that little stream which became eventually a great flood of art, and covered the whole land. I refer to the little church of Greenstead, in Essex, built in the early part of the eleventh century, of which the walls are composed merely of portions of trunks of trees—thick outside slabs—split or roughly hewn off, measuring 12 to 18 inches across, and 10 to 12 inches thick, roughly joined with tongues, but smoothed on the inside. These uprights, never more than 5 ft. to 6 ft. high, were originally tenoned into a head and cill ; but in restorations carefully carried out some yeass ago the cill had to be removed and the lower ends of the timbers cut off as far as they had rotted, and a new cill on brickwork substituted. Substantially, however, we see a wooden chapel of the eleventh century, and the timbers, sound and hearty, standing as they were then set up. One of them on the north side—where there was an original doorway—has a notch cut in it for the purpose of holding a holy water vessel. It seems pretty certain that this chapel was erected for the purpose of receiving as a temporary resting-place the body of St. Edmund the king, on its way (for the second time, date 1013) to 'Boedricesworth,' thenceforth to be called Bury St. Edmund's. So here is an open book on the earliest wooden construction in England, which any one may read."—*Timber Trade's Journal.*

A FOREST FESTIVAL.

A large number of the lovers of the forests assembled on Bear Hill, near Boston, October 22, to join in the Festival of the Forests, as the call poetically expressed it. It was really a meeting of a committee appointed by the officials of the town of Medford to consider what steps were advisable to preserve the Middlesex fells region in a natural state. The Honorable Elizur Wright was a member of the committee, and we extract the following from a report read by him :—

The committee is fully convinced by the stumps it has seen that there is not a single one of the multitude of rocky hills within this tract which has not at some time in the past been covered by large and flourishing white pine trees, and, of course, they may be again, and in a comparatively short time, if the proper and not very expensive conditions are supplied. These are, a little soil where the more or less horizontal rock surface has become extensively bare, seedlings planted, and exemption from fires. Fires are fatal to young pines and hemlocks, and that is the reason why the hills are now mostly covered with scrubby oak and other trees that sprout from the roots. These deciduous trees, even if exempted from fires, do not attain any considerable size, except in the valleys, which, in the fells, are comparatively narrow. Then, if fed with the muck, which is a nuisance in the reservoirs, ash, maple, oak, and black walnut would grow luxuriantly.

White pines ask almost nothing from the ground, except anchorage, and that they find for themselves in the cracks of the rocks. They take their food and rapidly build up their beautiful and perennial shades and venerable trunks, from the air, and no tree does more to adorn the winter landscape, to absorb and decompose the gases deleterious to lung and life, appropriating the carbon and restoring the oxygen. They are the most effective as well as the most delightful purifiers of the air, and the density of the summer shades does the most to prevent the evaporation of the water.

That all the land of this tract, not occupied by the reservoirs of water and the residences and gardens of the people charged with the care of it, should be covered with the densest forest possible, is too obvious to need proof. Otherwise the sun will drink more water from these fells than the people.

The progress, if not the perpetuity, of the human race on this good planet depends on the forests of the future. This is the teaching of history, as well as of chemistry and meteorology. Two hundred years ago men had a right to more fields and less wood on this continent, but the war has already been carried too far, and, if a healthy population is to increase, the tree population must increase, with equal pace, from what it now is.

The reasons why the propagation and care of forests should, to some extent, be a governmental function, and not be left wholly to private caprice, are :

1. Individual life is too short to have trees planted during its period, come to maturity. The individual proprietor of land, especially if not very wealthy, is prone to cut his crop of trees before it is ripe, and as clean as he does his rye, thus creating a desert.

2. A forest, in the absence of fire, never dies any more than a good government. Therefore a good government will take care that no forest, in a fit place, shall ever be killed.

3. Getting the best results from a forest requires a science and skill which but few individual proprietors can be expected to have. They all will best acquire such science and skill by seeing good examples on a large scale.

4. Pure air and pure water are common interests. Private caprice, ignorance or greed should not be allowed to injure them.

Preserving the purity of the air, especially, is not only a municipal, but a national and world question.

THE FUTURE MOTOR POWER.

The steam engine, which has been the means of revolutionizing manufacturing and transportation, was spoken of with a good deal of disparagement by several of the members of the British Association for the advancement of Science at the late meeting at Bath. Nearly every person who spoke on the subject gave it a bad name. It was stated that it was expensive to build, costly to run, difficult to keep in repair, dangerous to life and property, cumbersome, productive of dirt and noise, and not adapted to many purposes where a motor is required. In the opinion of some, the steam engine has had its day, and played its part, and was now ready to be put in a museum of curiosities. They think it is behind the times, and that it should give place to something better. These scientific men of Great Britain object to the steam engine because it does not meet the wants of the present age ; and for the additional reason that it is fast consuming the coal that will be wanted for heating purposes. They want a better force, more locomotion, quicker travel, less expense, and greater security. They want something that will propel canoes as well as ships ; that will run sewing machines as well as trip-hammers ; that will draw pleasure carriages as well as railway cars. They desire a motor that will not consume fuel, produce smoke, or cause noise; that can be managed by a child and run, if desired, in a parlor. They want something that will do all the steam engine does and many things beside.

In the opinion of most of the scientists of Great Britain, electricity is to take the place of steam in driving machinery and moving cars, and is to be generated by the action of tides, winds and falling water. They predict that wind-power will be utilized to a greater extent than any person in a previous age ever believed that it would. Wind will generate electricity for moving machinery, for lighting streets and warming dwellings in Ireland, Belgium, Denmark and other countries where there are few streams that afford water-power. The movements of the tide will produce the same effects in most countries that have an an extensive sea-coast, while the fall of water in rivers and streams will generate electricity in all mountain regions. The great electrical exhibition at Paris is doing much to draw attention to what is called the motor-power of the future. A picture called "The Queen of the Nineteeth Century" hangs in many of the shop windows. It is a female figure surrounded with a halo, and emitting rays of light from the hands, which are raised as if to enable the being to fly. The light gives the arms the appearance of wings. The artist is an enthusiast, and is regarded by many as a prophet. We all hope that his fair predictions may be realized. The steam-engine is a good thing, but we are ready for something better. It has done so well that till recently scientific men and inventors have not troubled themselves to make something better. Now that attention is drawn to electricity, great results may be expected.

LUMBERING AND FARMING.

There was a time when lumbermen scouted the idea of mixing their pursuit with farming. When they bought timber land they valued it for the logs and timber it would produce. For years the light, sandy soil on which pine grew in Michigan and Wisconsin, was considered nearly worthless for agricultural purposes. Lumbermen would strip this land of its forest growth, and then turn it over to the dominion of wilderness denizens, the wild beasts, and to the annual sweep of the devouring tempests of fire. But latterly a more economical spirit has aroused the owners of pine lands to make better use of their denuded real estate. Some of them have become awake to the conviction that it were cheaper to grow food supplies on their own soil, in the immediate vicinity of their logging camps, than to first pay for them in distant markets, and afterwards transport them, at a heavy cost, to the far-away camps. In the matter of grain and vegetables a great saving is thus made. Besides, their lands are thus converted from a dead waste of fallen limbs, and discarded timber, intermixed with growing briars, brambles and tangled undergrowth, to fruitful fields, and acquire a fair, saleable value as farm property. That heavy lumber concern, the Ludington, Wells & Van Schaick Company has adopted this thrifty scheme, and this year, on its own two farms, has raised 3,000 bushels of potatoes. Its other products this season consist of 400 bushels of onions, 500 bushels of beets, 300 bushels of carrots, and 5,000 heads of cabbage, besides peas, beans and other farm products. These will enter into the food supply of the logging camps this winter, wherein 600 men will be employed. In this connection it may be interesting to mention the other supplies that supplement those produced on the company's farms, and which mostly have to be purchased outside the lumber district. Among these are 800 barrels of flour, 300 barrels of beef thirty barrels of syrup, 35 barrels of peas, forty barrels of dried apples, and 300 bushels of beans. Its stock will consume 500 tons of hay, 20,000 bushels of oats, corn, bran, etc. Fifteen barrels of kerosene oil will be required to light its camps.—*Northwestern Lumberman.*

We understand that Mr. Thos. Deacon, Q. C., of Pembroke, has bought the old mill on the Tay, and that the machinery is being removed and the dam taken down. This will be the means of draining a large tract of land formerly drowned by the mill dam.—*Perth Expositor.*

Chips.

MESSRS. FLEWWELLING shipped from St. John, N. B., a large lot of matches to the West Indies per the *Rothesay*, which sailed on Saturday, November 12th.

MERRITT CHANDLER has sold to Thompson Smith, in the Cheboygan, Mich., district, the standing timber on 8,000 acres of land, the consideration being $33,000.

THE tow-boat *George Washington*, said to be the oldest on the Hudson River, has just been examined and licensed for another year. It was built in 1830 of live oak and cedar.

THE receipts at Albany, up to October 25, were 52,000,000 feet in excess of 1880, and it is expected that at least 70,000,000 feet more will arrive. The demand is reported firm.

EVERY dam owned by the Black River Flooding Association, Wis., was wrecked by the recent floods, and an assessment of $10,000 was lately levied on the stockholders to make the necessary repairs.

THERE will be a great deal of lumbering on the Restigouche and Metapedia rivers and their tributaries this winter. A great many more people are putting in teams than last year. Scows loaded with provisions and camp equipages are towed up stream daily.

THE *Mail* states that a vessel laden with lumber left Toronto on Nov. 10th, bound for Porto Rico, where she will get a return cargo of sugar. Hitherto lumber for the West Indies has been, with the exception of a few cargoes, from Montreal, shipped from New York.

THERE is a jam of 12 miles of logs at Sand Creek, and an 8 mile jam at Newaygo, with one mile more at the Flats. There are fully 100,000,000 feet of logs in the booms here. In order to cut all these floating giants of the forest this season it will be necessary for all the mills to run night and day.

MESSRS. R. P. & W. F. STARR are loading the brig *Sarah Wallace*, now at the railway wharf, at St. John, N.B., with a large assorted cargo for Bermuda. The cargo includes onion ends and slats, tomato ends and slats, a lot of boards and about 40 cords of soft wood for firewood—all from Messrs. Flewwelling, of Hampton.

THE Montreal *Gazette* says hemlock bark is quoted in this market at from $7 to $7.50 per cord, latest sales being reported by the car load at within that range of prices. Canadian bark has advanced one dollar per cord in the Boston market to $12.50. Freights have also advanced $9 per car from our bark districts to Salem, Mass., being now $52@53 per car. The farmers in Salem are manifesting considerable dissatisfaction over the advance.

AN improved machine for grinding wood for paper pulp has been patented by Mr. Nicolaus Kraiser, of Grellingen, Switzerland. The invention consists in a grinding stone mounted on a suitable shaft and surrounded by a casing, with a series of boxes on the sides for containing the blocks of wood, which are pressed against the sides of the stone by a rack and pinion actuated by a weight, or by springs or hydraulic pressure, whereby the block of wood is converted into a wood pulp.

THE North Hastings *Review* says that the rush to the shanties commenced on Monday. During the day a large number of waggon loads of men and outfits left this village, and the same evening five large loads of Rathbun's men aarived here on their way back. It is said that more men are going to the woods this season than for some years past. One reason is probably on account of the destructive fires which prevailed last fall, rendering it necessary to secure the timber on the burnt limits without delay.

THE Duluth *Lake Superior News* says J. S. Taylor & Sons are commencing preparations for logging on a large scale this winter. They have had a force all summer at their Stewart River camps, and will add to this crew enough men to get out some 3,000,000 feet, they hope, this winter. They have been at heavy expense in opening roads, building camps, etc., but now that such work is done, they can log to better advantage than last winter. Their logs now on Stewart River, some 500,000 to 700,000 feet, they will leave until next spring on account of the lateness of the season.

NORTHERN MINNESOTA'S PINE TIMBER.

Lumbermen are beginning to turn their attention to the splendid pine timber resources of Northern Minnesota, and it is safe to predict that it will not be many years before the northern portion of the North Star State—now almost a trackless forest—will be dotted with saw mills which will pour their products into the Red River Valley and Manitoba over the two lines of railway that are now certain to be constructed through the region referred to—one by the Northern Pacific Railway Company, from Brainerd, on the Mississippi River, to Emerson, and one from Duluth, also to terminate at this point. The splendid pine timber lands in the vicinity of Red Lake, being an Indian Reservation, still remain intact, but attention is being turned to the Government lands along Rainy River, the boundary line between Minnesota and Keewatin. A number of Duluth lumbermen have formed two companies, known respectively as "The Rainy River Log Running and Improvement Company," and the "Rainy River Boom Company." The incorporators are, in each case, John Maguire, S. R. Wentworth, D. E. Little, P. M. Graff, E. D. Graff, and J. R. Cook. The object of the first is to "improve for navigation and running of logs and timber the Little Fork, Big Fork and Rainy Rivers." The object of the second is to "construct, maintain, operate and keep in reasonable repair good and sufficient boom or booms at or near the mouth of Rainy River, for the purpose of collecting, receiving and securing any and all logs or timber that may be floated or driven down the Rainy River." The capital stock of the "Rainy River Log Running and Improvement Co." is fixed at $30,000, and of the "Rainy River Boom Co." at $25,000. There is the same board of directors in both companies, viz., John Maguire, D. E. Little and John R. Cook.—*Emerson International.*

The Fuel of the Future.

The *National Gazette* makes the following announcement in regard to the use of petroleum as fuel :—We shall soon be able to announce a wonderful stride in the mechanical appliances for using liquid fuel for generating steam in both marine and land boilers. The matter is in the hands of practical men, who will soon demonstrate they can make from twenty-eight to thirty gallons of crude petroleum, costing from eighty-five to ninety cents, do the work of a ton of coal, oosting from $4 to $4.25, without dirt or smoke, and when, as in the case of a large steamer carrying from forty to forty-five men in the fire room, one man in each will be abundantly able to keep up a uniform pressure of steam at all times. Liquid fuel is the intervening step between coal and electricity, which will, in due season, furnish motion for the world.

West Indian Trade.

The schooner *Guelph* is loading lumber at the N.R.R. wharf in Toronto, for the West Indies, where she will obtain return freights of sugar and molasses for Halifax or St. Lawrence ports during the winter. The shippers of the lumber, Messrs. Musson & Morrow, of Toronto, hope that by next summer she may return to Canadian lake ports with West Indian products. This experimental cargo of say 220,000 feet to Porto Rico is a venture the result of which will be looked for with interest. It exhibits enterprise, at least, and much may depend upon the successful or unsuccessful issue of this effort to introduce the islands of the Gulf of Mexico to the islands of the Western lakes direct, through the medium of their products.—*Monetary Times.*

Wooden Dishes.

The Wooden Dish factory is a new and extensive industry just started at Indianapolis, Ind. Not many years ago persons would have laughed at the idea of wooden dishes, but they have become a necessity. They are cut from the sycamore or the gum tree by most ingenious machinery, which will cut and trim 200,000 dishes a day ; other machines shape and fasten the cups together. Fifteen of these are employed, each of which can turn out 10,000 daily. The wood is, of course steamed, so as to be readily worked and moulded.—*N. Y. Observer.*

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FOR SALE.

150	Mlls.	White Pine,	1 x 10 Stock.
175	"	do	1 x 12 "
11	"	do	2 x 10 "
20	"	do	2 x 12 "
140	"	do	1 inch Siding .
20	"	do	1¼ "
40	"	do	2 x 10 Joists.
16	"	Cedar,	3 x 6 "
19	"	Basswood,	1¼ inch.

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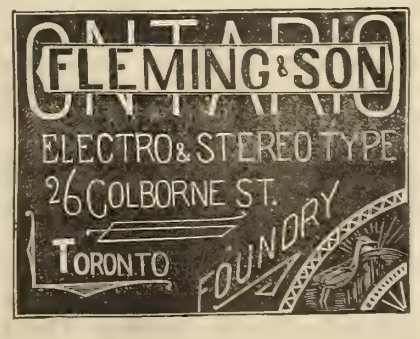

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WATER WORKS, THE LATEST AND MOST IMPROVED, MADE TO ORDER.
LIGHT and HEAVY BRASS and IRON CASTINGS.
☞Plans and Specifications on application.☜
The Walkerville Foundry
AND
MACHINE WORKS.
Walkerville, Ont., June 1881.

Market Reports.

MONTREAL.

From Our Own Correspondent.

Nov. 24th.—The shipping season is now over, and navigation from this port is closed, only a few market boats are still running, which are to go into winter quarters on Saturday. The total shipments of lumber from Montreal to the River Plate during the past season and for previous years were as follows :—

	Pine.	*Spruce.*	*Total ft.*	*Pick's.*
1881.....	11,806,152	1,023,644	12,829,796	35,145
1880.....	....	....	10,420,080	....
1879.....	....	....	12.476,150	....
1878.....	....	....	10,855,246	....
1877.....	....	....	8,787,928	....
1876.....	....	....	3,437,000	....
1875.....	....	....	10,123,000	....
1874.....	....	....	16,262,293	....
1873...	....	....	36,073,919	....
1872...	....	....	28,234,968	....
1871.....	...	....	16,005,935	....

It will be noticed from the above table that the shipments have been larger this year than any previous year since 1874. The total shipments of deals from Montreal to English ports during the season of 1881 were 18,236,849 feet, against 18,701,835 feet for the season of 1880, showing a decrease of 464,986 feet. There is a good deal of lumber lying on the wharfs yet, which has lately arrived, and dealers are busy getting it transported into yards. The demand lately has been light, and there is really so little done in this market that prices do not fluctuate much, if any, we therefore repeat our former quotations. For building lumber, ex yard, we continue to quote :—

Pine, 1st quality, ₱ M.....	$32 00@40 00
Pine, 2nd " ₱ M.....	18 00@24 00
Pine, shipping culls, ₱ M.....	12 00@15 00
Pine, cull deals, ₱ M.....	8 00@10 00
Pine, mill culls, ₱ M.....	5 00@ 6 50
Spruce, ₱ M.....	8 00@10 00
Hemlock, ₱ M.....	8 00@10 00
Ash, run of long culls out, ₱ M.....	16 00@18 00
Bass, " " ₱ M.....	14 00@16 00
Oak, ₱ M.....	35 00@45 00
Birch, ₱ M.....	17 00@20 00
Hard Maple, ₱ M.....	18 00@25 00
Lath, ₱ M.....	1 25@ 1 35
Shingles, 1st, ₱ M.....	3 00@ 0 00
Shingles, 2nd, ₱ M.....	2 00@ 0 00

CORDWOOD.—The cold weather for the past few days has stimulated the demand, but it is not very brisk, as yet; high prices seem to make people use coal instead. There are considerable quantities still on the wharves, for which holders would would probably shade prices rather than cart it into yards. The only change in prices is in tamarack, which is now quoted lower. Our figures are now on wharf, ex cartage :—

Long Maple.....	$6 50
Short "	6 00
Long Birch.....	6 00
Short "	5 50
Long Beech.....	5 50
Short "	5 00
Long Tamarack.....	4 50
Short "	4 40

LONDON, ONT.

From Our Own Correspondent.

Nov. 10th.—Less than twenty years ago it would have been considered a foolish undertaking to commence the erection of a huge block of buildings at this season of the year. I understand, however, that ere we are many days older the process of tearing down the Holman Opera House will begin, and on its site are to be built a handsome block of wholesale stores, and the building is to go on at once. Since we have had the Grand Opera House to go to, the Holman place has gone the way of all old and time worn institutions. The purchase of the property has been made by Messrs. Birrell, of the wholesale house of John Birrell & Co., and two other gentlemen, and it is the intention of the Birrel firm to occupy the largest portion of the new premises as their store, and no better site could be chosen, in fact this Holman property may be said to be about as valuable a one as there is in London, being situated, as it is, right in the heart of the city, on the principal street, and close to the G. W. R. depot. Well, all this description is only a prelude to informing you that the woodwork and lumber contract will be probably in the neighbourhood of $10,000, and it is expected that it will be given out to private contract, that is, no tenders will be publicly solicited.

In the past two weeks the lumber market has been brisk for the time of year. Though the sales have been small, they have been numerous, and it is simply a demand for the requirements to make things snug and secure for winter.

I am informed that a lumberman in this city is desirous of selling out an established business. It might be worth the notice of some of your readers.

Prices are about the same as in my last letter.

Later.

Nov. 24.—Since my last letter of two weeks ago nothing of particular note has transpired in this market. Lumber merchants seem all to be well occupied, and are sending out from their yards considerable stock for the purposes stated in my former letter, viz., making things snug and secure against the winter blasts.

Building, as may naturally be expected, is not now rushing, but mill men say they are busy notwithstanding. The large block of wholesale houses to be built on the Holman Opera House site, it has been said, will not be proceeded with this winter, but I have been informed in an authentic quarter that it will, and that the present building (Opera House) will be razed in a week or two. The contract for the lumber is not yet given out, but will be now in a few days.

Messrs. Green's mill is again rebuilt, and part of the machinery is at work.

I was informed the other day that the market here had advanced from one dollar to one dollar and a half, the result of a like advance in Sarnia, where the merchants have certainly put up their prices that much, but on making a very searching enquiry, I find prices here remain about the same, with an upward tendency, however, and the probability is that my next price list will have to undergo very material revising. Some parties in town are selling shingles at $2.90, but the bulk of the merchants, and in fact the merchants proper, are keeping their figures up at last quotations. Though Sarnia lumbermen have advanced, the Goderich men remain firm at former rates, and this is probably one reason why we have not advanced here. We do not take a great deal of lumber from Sarnia.

My report of the market at this date is,—very firm and steady, with indications of an advance.

Below are the prices at present :—

QUOTATIONS.

Mill cull boards and scantling.....	$10 00
Shipping cull boards, promiscuous widths.....	11 00
" " 10 and 12 in. stocks.....	11 50
Common boards, promiscuous widths.....	13 00
Scantling and joist, up to 16 ft.....	14 00
" " " 18 ft.....	14 50
" " " 20 ft.....	15 50
" " " 22 ft.....	16 50
" " " 24 ft.....	18 00
Common stocks	14 00
Common 2 in. plank.....	13 00
Cutting up plank and boards.....	18 00
Sound dressing stocks.....	17 00
Clear and picks	31 00
Three uppers, Am. inspection.....	35 00
½ inch dressed and matched flooring	20 00
¾ " " " "	20 00
1 " " " "	20 00
XXX sawn shingles, ₱ M.....	3 00
Lath per 1000 feet.....	4 00

TORONTO.

From Our Own Correspondent,

Nov. 22nd.—Lumber shipments from this port to the American market may be said to have virtually closed for this season. Some few cargoes may yet go forward, but the determination of all insurance companies not to insure deck loads makes it unprofitable for vessel owners, as few shippers care to run the risk themselves, and to stow good lumber in the hold is not desirable; so that both shippers and vessel owners must work at a disadvantage in any more shipments they may see fit to make this season.

The decrease in shipments for the American market has resulted in a marked increase of lumber for the local market, and it may not be amiss to give you a record of my observations as to the stocks carried by the various yards which I have visited :—

Bryce Bros., corner of Front and Frederick streets, hold perhaps the largest stock of heavy bill lumber to be found in any of the yards here, and their stock is only light compared with that held by that firm at other times in the past; the next yard, a little further west on the esplanade, is that of Reid & Co., their stock is a compact one, but deficient in various kinds of dimension stuff. Still a little further west we come to the yard owned by J. B. Smith, this gentleman being largely interested in the manufacture of all building material, does not at any time carry a large stock of dimension stuff, but is well up in all kinds of dressed lumber, and furnishes large bills for points as far east as Montreal, and is one of our oldest and most reliable dealers here. A little further east and on the corner of Queen and Sherbourne streets, we have the yard owned by De LaPlant & Co., who carry a compact little stock, and are also wood and coal dealers. One mile to the N. W. of the last mentioned we come to the yard owned by C. H. Edwards, whose stock is extremely light, and largely difficient in the various sizes of joisting. A compact trade is done by Mr. Edwards, he being also a dealer in coal and wood. A little farther north stands the yard of P. A. Scott, this yard has been circumscribed by the action of our City Council in forcing a street through it, and for which, it is claimed by the proprietor, he has not been adequately remunerated. However, considering the size of the yard, he carries a snug stock, but like all the other yards mentioned, short in dimension stuff. South-west of this yard we arrive at the premises kept by Messrs. Hillock & Kent, and, considering the size, they undoubtedly carry the best assorted and most compact stock to be found in the city, and although their stock may not be quite as varied as the dealer on whose sign read "Tar, Treacle, Gohly Books, Gimlets, etc., etc., sold here," still anything in the wood line from lignum vitæ, or boxwood, to clear pine lumber, can constantly be obtained here. To the south of this yard, and situated on the esplanade, we find the extensive shops and yards kept by John Oliver, and to give you anything like a full description of the stock held by this firm would take up more space than can at present be spared, suffice it to say that their stock is both a varied and costly one. They do not profess to carry a large stock of pine, but in hard woods and fancy woods, including veneers, they doubtless bear off the palm from all other yards of the kind in the Dominion, and the entire yard being covered over enables them to keep their stock in the best order possible. One mile to the northwest of this yard we come to the yard of Messrs. S. & S. J. Willcock, formerly Richardson & Willcock, the senior member having lately retired, the business is now conducted by the former partners. The stock carried by this firm in their yard is at all times light, and is at present quite small, but this firm manage to fill a large portion of their orders direct from the cars, and so save considerable cost for piling and teaming, and the business done by this firm in this way is quite large. Nearly a mile to the north-west of this yard and near the corner of College and Bathurst streets, stands the yard owned by Messrs. Davidson & Malcolm. The members of this firm are both young men and only started in business one year ago, and have already earned for themselves a good reputation for prudence and push. The stock carried by this firm is light in bill stuff, but well up in boards, shingles, and lath, and the business done by this firm is rapidly increasing. To the south-west of this yard, and near the corner of Queen and Bathurst streets, stands the yard owned by Wm. Latch. The stock on hand here is also light in bill lumber, and only a scant stock of good boards. The business done by this firm is more of a car load business than retail. Near the village of Parkdale stand two yards, divided only by a board fence, the first of which is owned by Messrs. McKinley & Son. This firm are exceedingly close and careful buyers, and carry at all times a snug stock, and having the city to the east of them, and the village of Parkdale to the west, and the railroads passing close to their yard, they have a good opportunity of filling up their yard with short hauling, and a brisk building trade immediately around them. The yard to the west of the last named is owned by Joseph Davidson, and is the largest yard in point of superficial area in the city, and is the only yard in which the writer found a good stock of bill lumber. The facilities enjoyed by Mr. Davidson for furnishing this class of lumber will account for the stock in his yard. In the better class of lumber he falls short of many others before named.

QUOTATIONS, CAR LOADS.

Mill cull boards and scantling.....	$ 9 00
Shipping cull boards, promiscuous widths.....	11 00
" stocks.....	12 00
Scantling and joist, up to 16 ft.....	11 50
" " " 18 ft.....	12 50
" " " 20 ft.....	13 00
" " " 22 ft.....	13 50
" " " 24 ft.....	14 00
" " " 26 ft.....	15 00
Scantling and joist, up to 28 ft.....	16 00
" " " 30 ft.....	18 00
" " " 32 ft.....	20 00
" " " 34 ft.....	22 00
" " " 36 ft.....	23 00
" " " 38 ft.....	26 00
" " " 40 to 44 ft.....	32 00
Cutting up planks to dry.....	18 00
" boards "	16 00
Sound dressing stocks.....	14 00@16 00
Picks Am. inspection.....	26 00
Three uppers, Am. inspection.....	34 00

B. M.

1½-inch flooring, dressed.....	28 00
1½ " " rough.....	14 00
1¼ " " dressed.....	24 00
1¼ " " undressed.....	14 00
1 " " dressed.....	20 00
1 " " undressed.....	15 00
¾ Beaded Sheeting, dressed.....	20 00
Clapboarding, dressed	12 50
XXX sawn shingles, ₱ M.....	2 80
XX sawn shingles.....	2 75
Sawn Lath.....	1 75

OTTAWA.

From Our Own Correspondent.

Nov. 23rd.—All indications in this vicinity show conclusive signs that lumbering operations for the season of 1881 have come to a close. The last fleet of barges for American ports left this week. All the mills, with the exception of one or two, have put on their winter's dress, and the small army of mill hands have left for the scene of their winter's work in the shanties of the different firms' limits on the Upper Ottawa. The closing this year is somewhat earlier than former seasons, owing to the supply of logs becoming short. Retrospectively speaking, the result of

THE SEASON'S OPERATIONS

cannot be said to have come up to general expectations formed at the commencement of the year. Various causes are adduced for this, the principal one being the impossibility of having the logs cut last winter driven to their destination, owing to the early and continued falling of the water on the tributaries of the Ottawa. It is estimated that between Chats Rapids (where there are about 200,000 logs) and Frost's Channel, there are between 350,000 and 400,000 saw logs. These will have to remain where they are until next spring. There are numerous other instances of

LOGS BEING STUCK,

and the quantity that will thus be held over will be very large. Notwithstanding this the lumber concerns have made preparations to take out an average number the coming winter, and it is anticipated, all things being favorable, that the cut next season will surpass that of any other season for years past, as a greater amount of logs will be brought down. Contracts entered into at the beginning of the season have been pretty well fulfilled.

FEW SALES

are reported lately. Yards hereabouts are fairly stocked now, but by the end of a few months they will present a rather barren appearance, as, besides the local trade, on an average seventy and eighty carloads of lumber leave the Chaudiere weekly for Boston during the winter months. Quotations rule firm, but there is a prospect of an advance, the supply being small and the demand on the American market on the increase. The average quarterly export of lumber and shingles from this port to the States is valued at about $550,000.

BUSH FIRES

in the Ottawa Valley during the past season have caused a great amount of damage, the loss on limits being estimated at $5,000,000. In the Gatineau district thousands of acres of mountain covered with pine and hemlock are burned every season by fires either started by settlers or parties prospecting for phosphates. In this connection it is gratifying to know that stringent measures are to be adopted by the Government of the Province of Quebec to prevent this great destruction of the forests. A Bill to this effect is being prepared and will be submitted at the next session of the Local House that will assure the needed protection in that Province, at least.

SAW LOG JOBBERS

are beginning their operations. Rates paid are $1.10 per standard for pine, and 50 cents for spruce logs. Owing to the prevailing scarcity

of shantymen, wages are on the increase. $15 to $18 is paid to common shanty hands, $20 to $22 to log-makers, and $35 to cullers,—fully twenty per cent. more than the wages paid last year.

ON THE LIEVERES,

a tributary of the Ottawa emptying at Buckingham, below this city, lumbering operations this winter will be carried out on a more extensive scale than ever before. The opening of the large phosphate mines in that district gives rise to a new market.

MISCELLANEOUS.

Ross Bros., Buckingham, will have no shanties next winter on Priest Creek, their limits in that locality having been destroyed by forest fires.

Mr. Martin, of this city, has erected a mill in the west part of Templeton.

In expectation of a large traffic in river navigation next summer, boat builders about here expect to put in a busy winter. Over sixty hands are now employed building lumber barges in the yards at Hull, opposite this city.

ST. JOHN, N. B.

From Our Own Correspondent.

Nov. 21st.—Although our harbour is open all winter, and shipments may be made any day in the year so far as the frost is concerned, still shipping operations from the present date till spring must necessarily be on a very limited scale, consequently we cannot expect much of general interest to report concerning our wood trade during that period.

DEALS.

As a consequence of the unusual scarcity of deals, prices have advanced somewhat since last report. Country sawn are worth $10, and sales of city manufacture have been made at $11 per M. superficial feet.

FREIGHTS.

Since our last the bottom appears to have dropped out of the freight market. Shippers are well supplied with tonnage, and the stock of deals for which tonnage has not been engaged is so very light that holders are disposed to wait their time, and take full advantage of their position. The last transaction reported was that of the *Arklow*, 728 tons, for east coast of Ireland or Bristol Channel, at 56s. 3d.

SHIPMENTS.

The shipments of deals and other sawn lumber are as follows :—

For Europe	6,852,000	Sup. feet.
" United States	1,661,000	"
" Africa	540,000	"
" West Indies	397,000	"

SHIPPING.

The following is a list of the vessels in port, with their tonnage and destinations :—

Paramatta, 925, Bristol Channel.
Latona, 945, Liverpool, London or Bristol Channel.
Bertie Bigelow, 1,142, Liverpool.
Andrew Johnson, 2,005, Liverpool.
Thos. N. Hart, 1,200, London.
Sea Bird, 333, Liverpool.
Avonmore, 1,398, London.
John Campbell, 729, London.
Maori, 700, Londonderry.
Annie Stafford, 1,200, London.
European (s), 1,774, Liverpool or London.
Arklow, 728, E. C. Ireland or Bristol Channel.
Abram Young, 756, waiting.
Atlantic, 412, discharging.

ALBANY.

Nov. 22.—We have had several very busy days in the district since our last report, receiving, storing and shipping lumber. Buyers from New York, the east, and New Jersey, have been pretty plenty, not purchasing by large lots, but taking hold freely to piece out, and in some instances taking lots of 100,000 to 300,000 feet, Prices are steadily maintained. Our official report of receipts by canal are to the 8th inst, only ; since then receipts have been large, blocking up the canal at several points. The demand for vessels is active ; all offerings are taken on arrival.

Coarse lumber is coming forward rapidly and is disposed of about as fast as it arrives, and at full prices ; from now to the close of navigation a large business will be done.

The receipts by canal at Albany from the opening of navigation to the 8th inst. were :—

	Bds. & Sctl.,ft.	Shingles,m.	Timber,ft.	Staves,lbs.
1881	409,764,000	9,380	1,000	6,555,000
1880	240,627,500	6,379	10,685	638,209

Freights.—From Tonawanda to Albany, $2.50. From Oswego to Albany, $2. From Port Hope to Oswego, $1.40. From Ottawa to Albany, by boats, $1.50 ℔ M. feet.

Quotations at the yards are as follows :—

Pine, clear, ℔ M.	$53 00@63 00
Pine, fourths	48 00@58 00
Pine, selects	43 00@53 00
Pine, good box	19 00@31 00
Pine, 10-in. plank, each	00 38@00 44
Pine, 10-in. plank, culls, each	00 19@00 22
Pine boards, 10-in	26 00@28 00
Pine, 10-in. boards, culls	00 18@00 19
Pine, 10-in. boards, 16 ft., ℔ M.	25 00@30 00
Pine, 12-in. boards, 16 ft	25 00@30 00
Pine, 12-in. boards, 13 ft	26 00@28 00
Pine, 1½ in. siding, select	38 00@40 00
Pine, 1½-in. siding, common	15 00@18 00
Pine, 1-in. siding, select	40 00@42 00
Pine, inch siding, common	16 00@19 00
Spruce, boards, each	00 00@00 16
Spruce, plank, 1½-in., each	00 00@00 20
Spruce, plank, 2-in., each	00 00@00 30
Spruce, wall strips, each	00 00@00 12
Hemlock, boards, each	00 00@00 13
Hemlock, joist, 4x6, each	00 00@00 31
Hemlock, joist, 2½x4, each	00 00@00 13
Hemlock, wall strips, 2x4, each	00 00@00 10
Ash, good, ℔ M.	35 00@40 00
Ash, second quality, ℔ M.	25 00@30 00
Cherry, good, ℔ M.	60 00@70 00
Cherry, common, ℔ M.	25 00@35 00
Oak, good, ℔ M.	38 00@43 00
Oak, second quality, ℔ M.	20 00@25 00
Basswood, ℔ M.	22 00@25 00
Hickory, ℔ M.	36 00@40 00
Maple, Canada, ℔ M.	26 00@30 00
Maple, American, per M.	25 00@28 00
Chestnut, ℔ M.	35 00@40 00
Shingles, shaved, pine, ℔ M.	0 00@ 6 00
" 2nd quality	0 00@ 4 50
" extra, sawed, pine	0 00@ 4 00
" clear, "	0 00@ 3 30
" cedar, mixed	0 00@ 3 30
" cedar, XXX	0 00@ 4 00
" hemlock	0 00@ 2 25
Lath, hemlock, ℔ M.	0 00@ 1 62
Lath, spruce, "	0 00@ 1 87
Lath, pine, "	0 00@ 2 00

CHICAGO.

Nov. 16.—During the past week the receipts of lumber have exceeded those of the corresponding week of last year by 6,000,000 feet, while the receipts of shingles have been less by about 2,000,000. The total receipts of lumber, as reported, were 50,043,000 feet, the bulk of which went at once to the yards, and on but one occasion has there been anything like a large fleet at the sales market. What was offered found a firm and advancing market, and contrary to the experience of the past two months, offerings were quickly taken at an advance of fully half a dollar over our former quotations. This advance was sharp, coming almost wholly in one day.

CARGO QUOTATIONS.

Joist and scantling, green, ordinary lengths	$10 25@10 75
Joist and scantling, green, 20 feet and over	12 00@15 00
Mill run, choice green	16 50@21 00
Mill run, medium, green	13 00@16 50
Mill run, common, "	11 75@13 00
Shingles, standard	2 20@ 2 35
Shingles, extra A	2 37½@ 2 60
Lath	1 85@ 1 90

OSWEGO, N.Y.

Nov. 25.—No change in quotations. Demand good. Receipts for shipment to tide water have about ceased. Dealers are getting in large stocks, and the assortment for winter bids fair to be the best ever held in this market. The following are the quotations :—

Three uppers	$42 00@45 00
Pickings	32 00@35 00
Fine, common	20 00@25 00
Common	14 00@16 00
Culls	11 00@13 00
Mill run lots	17 00@22 00
Sidings, selected, 1 inch	30 00@37 00
1¼ inch	34 00@38 00
Mill run, 1x10, 13 to 16 feet	16 00@21 00
selected	20 00@25 00
shippers	16 00@17 00
Strips, 1 and 1¼ inch mill run	14 00@18 00
Culls, selected	23 00@32 00
Culls	10 00@13 00
1x6 selected for clapboards	25 00@35 00
Shingles, XXX, 18 inch, pine	3 85@ 3 90
XX, " "	2 80@ 3 00
XXX, 18 inch, cedar	3 00@ 3 30
XX, " "	2 25@ 2 50
Lath	1 60@ 1 80

TONAWANDA.

CARGO LOTS—SAGINAW INSPECTION.

Three uppers	$40 00@45 00
Common	17 50@20 00
Culls	11 50@12 50

BUFFALO.

We quote cargo lots :—

Uppers	$40 00@45 00
Common	17 50@20 00
Culls	11 50@12 50

LIVERPOOL.

Nov. 1.—Farnworth & Jardine say "the arrivals from British North America during the past month have been 46 vessels, 31,356 tons, against 12 vessels, 6,122 tons, during the corresponding month last year. There has been a fair amount of business transacted during the month. The arrivals have been numerous, and the deliveries have been good. Stocks, with the exception of pitch pine, are very moderate, and as the import for the remainder of the year promises to be on a reduced scale, we may fairly anticipate that at the close of the season they will not exceed the requirements of the winter months." Of New Brunswick and Nova Scotia spruce and pine deals, and other woods, they say :—" The deliveries during the month have slightly exceeded the imports, leaving us with the very moderate stock of 16,921 standards, or little more than two-thirds of that held last year at the like time ; still the market is not at all buoyant, and prices are barely maintained ; however, as there is every prospect of the arrivals during the remainder of the season being on a moderate scale, we may soon expect to see some advance in prices. Pine deals are rarely asked for, and prices are low. The consumption of birch has been fair, and the stock is light, particularly of good quality ; prices have been fully maintained." The following quotations are given :—

Birch.—By auction, St. John, 19 inches and up, at from 21d. to 23d. per foot ; 17 to 18 inches, at 18d. per foot ; Lower Port, 15 to 20 inches, at 16½d. per foot, P. E. I., 15 inches at 13½d. per foot.

Quebec Pine Deals.—1st and 2nd quality no wholesale transactions to report ; 3rd quality at £9 per standard.

Spruce Deals.—By auction, St. John, at from £7 to £7 2s. per standard, and by private at £7 5s. per standard. Lower Ports at from £6 15s. to £7 per standard. Miramichi Pine Deals, 3rd quality, at from £6 to £6 15s. per standard ; 4th quality at £6 per standard.

Scantling and boards, 6 inches and under, at from £6 10s. to £6 15s. per standard, Boards at £6 per standard.

Palings, 5 feet 3 x 1 inch, at from 72s. 6d. to 75s. per mille ; 4½ feet x 1 inch, at 62s. 6d. per mille.

The imports of deals from New Brunswick from Jan. 28th to Oct. 31st. were 3,802,205 pieces this year as against 4,705,593 in 1880 and 3,457,145 in 1879.

Nov. 3.—Duncan, Ewing & Co. say "the consumption during the past month has shown a good increase over the previous one, and with moderate stocks on hand prices should improve. The better tone which has for some time past been making itself felt in the general trade of the country seems to have reached the wood trade at last, and prospects may be said to have a hopeful appearance." They quote ;—

Spruce deals continue firm at late rates, sellers not being inclined to give way. Sales of St. John, N.B., by private treaty, for cargoes of good specification, £7 5s. ex quay. By auction, a cargo of St. John, N.B., more than half 7 inch and under, realized £7 1s. per standard. Pipe and puncheon staves continue in request at advanced prices.

LONDON.

The following is an extract from Messrs. Churchill & Sim's circular, dated November 3rd :—Prices, which were steady during the first half of October, were depressed towards the end of the month by rumours, for which it is difficult to find any real foundation, that very heavy shipments were being made for London, and that the market would again be overstocked by the end of the year. So far as it is possible to ascertain there is no likelihood of this being the case. Deck accommodation is bespoken for 111 cargoes, against 92 at the same time last year, and although this may hardly represent the full difference in tonnage—a greater proportion being in steamers of large carrying capacity—the excess is trifling when compared with a stock many millions of pieces short, and increased dock deliveries of 600 to 800 P.S.H. a week. The arrivals of wood-laden tonnage in the first ten months of the year have been 100,000 tons less than last year, and the dock deliveries 26,000 P.S.H. of deal, battens, and boards more.

Seventy-five million feet of hemlock lumber have been cut at Williamsport, Pa., this year, as against 15,000,000 feet last year. Pennsylvania lumbermen are just beginning to see the value of this kind of timber.

L22-1y

LEATHER BELTING.

Chipman, Renaud & Co.

MANUFACTURERS OF

LEATHER BELTING,

FIRE ENGINE HOSE

LACE LEATHER, &c.

124 & 126 Queen St. L25-1y

MONTREAL

ABRAMS & KERR

MANUFACTURERS OF

Steam Engines, Mill Gearing, Rotary Mills, Shafting, Planers, Hangers, Pulleys, Variety Moulders.

SPECIAL MACHINERY MADE TO ORDER

Latest Improved Spool and Bobbin Machinery.

Every Variety of Heavy and Light Casting.

L24-1y

Foundry and Machine Shop on City Road,

ST. JOHN, NEW BRUNSWICK.

ROBIN & SADLER

594, 596, 598, St. Joseph St.

MONTREAL

Manufacturers of

LEATHER BELTING

Fire-Engine HOSE,

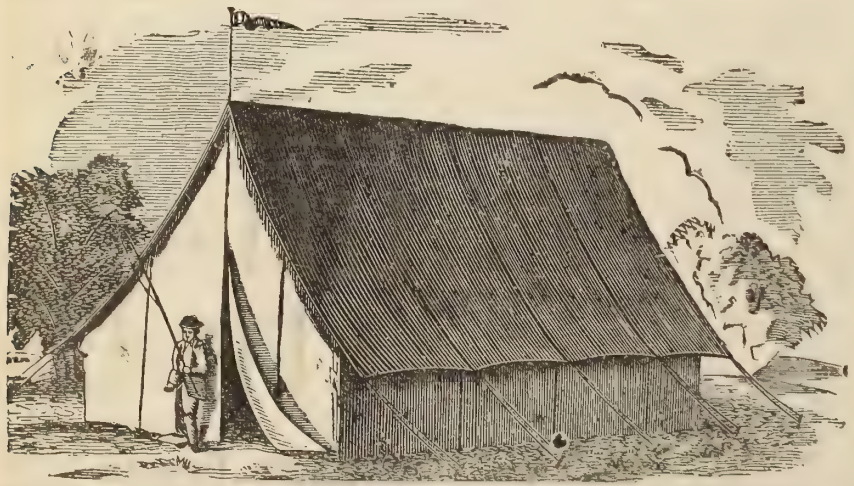
Lace Leather,

Mill Supplies, &c.

1y-L18

National Manufacturing Company

202 SPARKS STREET, OTTAWA.



manufacturers of Tents for Lumbermen, Sportsmen, Camp Meetings, Photographers, Lawn and military Encampments, with or without extra roofs, all sizes and styles, white or fancy striped, mildew proof or plain. Prices from $5, upwards. Flags of all descriptions, (regulation sizes) made of the best of silk-finish bunting. CAMP BEDS (Bradley's Patent) the best bed ever invented; size when folded 2 x 6 in.; 3 feet long, weighing only 11 pounds, but strong enough to bear the weight of any man. Waterproof wagon and horse-covers, tarpaulins sheets, coats and leggings of every description made to order on the premises. ☞Special rates to Lumbermen. Send for catalogue and price list to

NATIONAL MANUFACTURING CO.,
202 Sparks Street, Ottawa

b27

The Best Axes in the World!

Single, Double and Triple Steel, 28 Patterns.

Warranted Good or Exchanged.

And Burrell's, Warnock's, and Dundas Axes, made specially for the Lumber Trade, repacked any weights without extra charge. Lindsay Pattern of Broad and Blocking Axes. LANCE TOOTH SAWS, warranted good. P. Jewill & Sons (Hartford, Conn.) LEATHER BELTING. 2d CUT FILES. LATH YARN. Mill and Shanty Hardware. No. 1 LARD OIL. Heavy HAMES, BUCKLES and HARNESS TRIMMINGS. Ballard and other RIFLES, from $10 each. Large assortment of CARTRIDGES.

GEORGE STETHEM, Peterborough, Ont.

Importer, Jobber and Retail Dealer in Hardware. 12L17

Wrought Iron Shanty Cook Stoves

The Best Article ever offered to the Trade.

I have much pleasure in drawing attention to my **WROUGHT IRON COOKING STOVE, for Shanty, Hotel and Boarding House use.** These Stoves are made of **Heavy Sheet Iron**, the top and lining of the fire-box being of **Heavy Cast Metal** and all the connecting parts of substantial **Wrought Iron Work.** The dimensions of these Stoves are as follows:—

SINGLE OVEN STOVE

Top surface contains six 10-inch holes, with ample room between, and one oven 16 x 24 x 26.

DOUBLE OVEN STOVE

The Double Oven has a top surface containing twelve 10-inch pot holes, with two ovens, each 16 x 24 x 26. One fire-box of suitable size for area to be heated. Below will be found Testimonials from some of the leading Lumbermen, who have used my Wrought Iron Cook Stoves since I commenced manufacturing them. They are the names of gentlemen who are well known and reliable, and will carry more weight than any recommendation of my own could do.

The Best Stove I have ever Used.

PETERBOROUGH, May 31, 1880.

ADAM HALL, Esq., Peterborough. Dear Sir,—I have used your Wrought Iron Cooking Stove in our lumbering operations since its introduction here, and have no hesitation in saying that I prefer it to any other. For durability, economy and efficiency, where a large number of men are employed, it is the best stove I have ever used. You can, with confidence, offer it to hotels, boarding houses and lumbermen.

Yours truly, THOS. GEO. HAZLITT.

The Stove for Lumbermen.

PETERBOROUGH, June 1st, 1880.

ADAM HALL, Esq., Peterborough. My Dear Sir,—We have used your Wrought Iron Cooking Stove and find it is very satisfactory for lumber operations, especially so on drives. We can recommend it highly.

Yours truly, IRWIN & BOYD,

Gives the Greatest Satisfaction.

PETERBOROUGH, June 3rd, 1880.

A. HALL, Peterborough. Dear Sir,—I have had the Wrought Iron Cook Stove, purchased from you, in constant use ever since last fall, and it gives the greatest satisfaction in every respect. I can recommend them highly to any one who is in the lumber business. Very truly yours, GEO. HILLIARD, M.P.

EVERY STOVE GUARANTEED

All the necessary TINWARE and CUTLERY for Shanties suppied at the Lowest Prices.

ADAM HALL, Peterborough.

HART EMERY WHEEL COMPANY, Limited

HAMILTON, CANADA.

GILBERT HART, Detroit, President. JAMES T. BARNARD, Hamilton, Secretary-Treasurer. SAMUEL BRIGGS, Hamilton, Superintendent.

MANUFACTURERS OF THE CELEBRATED

DETROIT

EMERY and CORUNDUM WHEELS

These Wheels are Wire Strengthened

And Specially Adapted For Saw Gumming

Neither Animal nor Vegetable Glue or Gum being used in their composition, they are NOT LIABLE TO HEAT, and give out no Odors, while

They Surpass All Other Wheels for Free Cutting and Durability.

We refer to the following well known Saw Manufacturers for Opinions as to the Quality of our Wheels :

Messrs. SHURLEY & DIETRICH, GALT.

Messrs. R. H. SMITH & CO., ST. CATHARINES.

JAMES ROBERTSON, ESQ., MONTREAL.

Messrs. JAMES ROBERTSON & CO., TORONTO.

WE ALSO REFER TO

WILLIAM HAMILTON, ESQ., PETERBOROUGH, Manufacturer of the Covell Saw Sharpeners.

Messrs. H. B. RATHBUN & SON, DESERONTO, Lumber Merchants.

lyll

Northey's Steam Pump Works

BOILER FEED PUMPS,
AIR AND CIRCULATING PUMPS,
STEAM FIRE PUMPS, and
WRECKING PUMPS.

MINING PUMPS,
PUMPS SPECIALLY ADAPTED for
OIL PIPE LINES,
And CITY WATER WORKS.

No. 47 King William Street.

HAMILTON, ONTARIO.

SEND FOR CIRCULAR. L17-1y

MILL SUPPLIES.

Extra Stretched and Patent Smooth Surface

RUBBER BELTING—in Stock, 2, 3, 4, 5, and 6 Plies.
HOYT'S CELEBRATED LEATHER BELTING.
COTTON BELTING, for Flour Mills, &c., Superior Quality.

DISSTON'S CELEBRATED MILL SAWS.

Steam Packing of all kinds, Rubber and Linen Hose, Silk Bolting Cloth, Emery Wheels, Lacing Leather (Page's Genuine), Lard, Seal, Cylinder, Spindle, West Virginia and Wool Oils. Our Stock includes Mill Supplies and Rubber Goods of all kinds. Quotations furnished for any part of Canada. 21

ESTEY, ALLWOOD & CO., SAINT JOHN, NEW BRUNSWICK.

PARKER & EVANS

SOLE PROPRIETORS OF THE

FAMOUS INTERNATIONAL

BOILER FLUID COMPOUND.

Patented 5th March, 1877.

This Compound will save its Cost many times in one year by saving fuel.
It eradicates scale, and when the Boiler is once Clean a very small quantity keeps it Clean and Free from all Incrustation.
It is perfectly harmless to Iron, and emits a clear pure Steam.
In ordering, mention the CANADA LUMBERMAN. L241y

504 St. Paul Street, MONTREAL.

ESTABLISHED 1820.

EAGLE FOUNDRY!

GEORGE BRUSH

14 to 34 King and Queen Streets, MONTREAL,

MAKER OF

Steam Engines, Steam Boilers, Hoisting Engines, Steam Pumps,

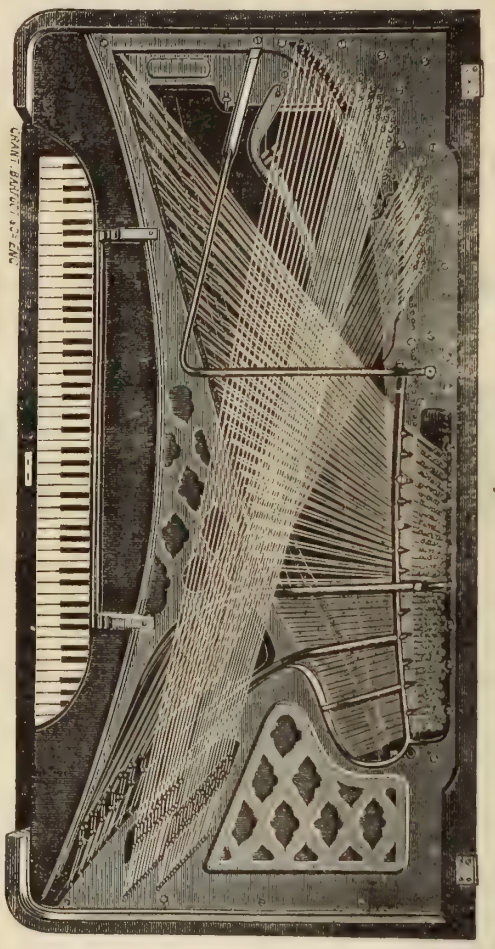
CIRCULAR SAW MILLS, BARK MILLS, SHINGLE MILLS,

Ore Crushers, Mill Gearing, Shafting, Hangers and Pullies, Hand and Power Hoists for Warehouses, &c., &c.,

AND AGENT FOR L25-1y

"Water's" Perfect Steam Engine Governor, and "Herald & Sisco's" Centrifugal Pumps

The Rainer Piano Always Triumphant!



CARRIES OFF THE HONORS OF 1880 AS FOLLOWS:

At Toronto Industrial Exhibition, 1st Prize, Diploma & Medal for Best Square Piano
At Hamilton Provincial Exhibition - - - 1st Prize and Diploma
At Brantford Southern Fair - - - - - 1st Prize and Diploma
At Guelph Central Exhibition - - - - - 1st Prize and Diploma

SEND FOR CATALOGUE.

RAINER, SWEETNAM & HAZELTON,

MANUFACTURERS,

GUELPH, ONTARIO. L14

The Crowning Triumph of the Bell Organ

The Bell Organs have just received the HIGHEST AWARD and SPECIAL PRIZE (Gold Medal) at the International Exhibition, Sydney, Australia, this year for their Organs over all the English and American makers. This, along with the unlimited awards, prove that

THE BELL ORGANS LEAD THE WORLD.

WE RECEIVED

Only Medal for Parlor Organ, Provincial Exhibition, 1878
Only Medal for Parlor Organ, Industrial Exhibition, 1879
And Gold Medal.....at Sydney, Australia, 1880

WE RECEIVED

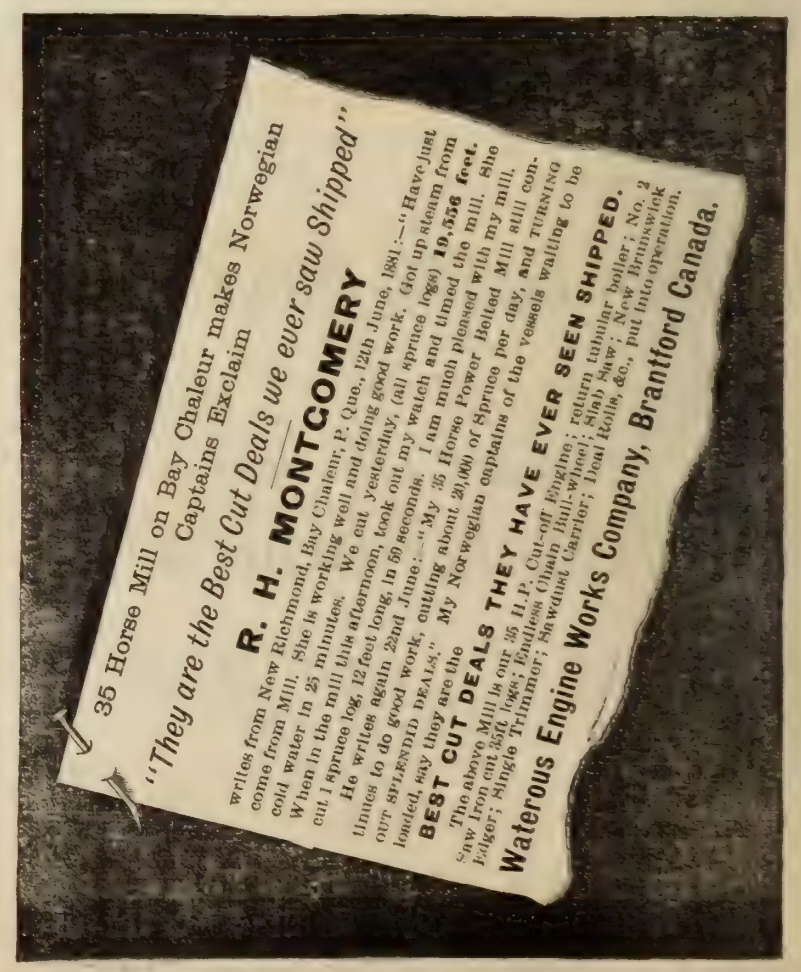
Medal and Diploma..... .....Provincial Exhibition 1871
Medal and Diploma.....Centennial Exhibition, 1876
International Medal and Diploma, Sydney, Australia, 1877

The Bell Organ Manufactory is the Largest and Oldest in the British Empire, and the fact that we have sold nearly 15,000 proves that they are the best in the market. We GUARANTEE ALL OUR ORGANS for five years Correspondence invited. Illustrated Catologue mailed free.

W. BELL & CO.

41 to 47 East Market Sugare, GUELPH, Ont

L17



D. McLACHLAN & SONS,

Manufacturers of all Descriptions of

STEAM BOILERS.

SHIPS' WATER-TANKS. Repairing Punctually Attended to.

1y-L20 NORTH SLIP, ST. JOHN, NEW BRUNSWICK.

OAK HALL

Nos. 115, 117, 119, 121, King St. East, Toronto.

We are the most Extensive CLOTHIERS in Canada.

We carry a STOCK of FIFTY THOUSAND DOLLARS to choose from.

We watch the interest of our Customers. Our stock is FULL of the very best goods in Scotch, English and Canadian Tweeds.

We BUY and SELL for Cash, therefore it enables us to do business on very SMALL PROFITS.

NOTE THE PRICES.

We give a Good Tweed Suit for.....$6 00
We give a Good Tweed Pants for..... 1 50
We give a Good Overalls for 0 35

LUMBERMEN!

When you visit Toronto, come direct to OAK HALL, and fit yourselves out with a Good Suit. Remember the address:—OAK HALL, the Great One Price Clothing House, Toronto, opposite St. Jame's Cathedral. 1yL13

LUMBERMEN

Will always find a Large Stock of

Shanty Blankets

AND

HORSE BLANKETS

At LOWEST Mill Price, at

JNO. MACDONALD & CO'S

TORONTO.

Send Sample Order for our LINED SHAPED HORSE RUG, a Specialty, highly recommended for Wear and Warmth.

6L22

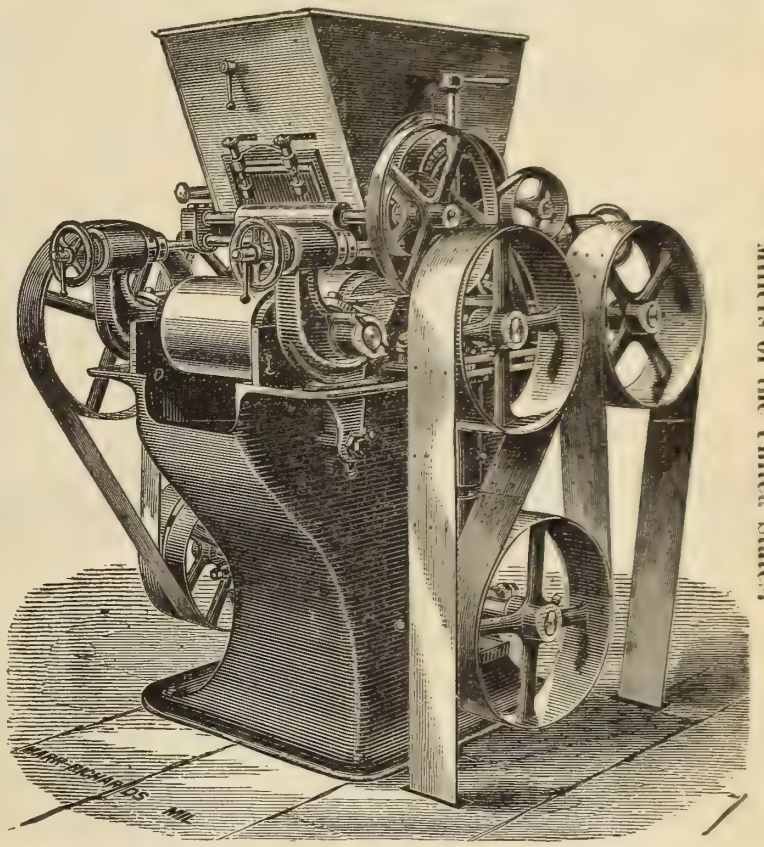
Flour Making by the New Process

GRAY'S PATENT

NOISELESS ROLLER MILL

A Model of Perfection!
Every Mill a Success!

CORRUGATIONS of all Descriptions.
Smooth Iron or Porcelain ROLLS.



These Roller Mills are used by all the Representative Millers of the United States.

The Machine is Perfect in all its adjustments, and RUNS WITHOUT NOISE.

It is doing Better Work than any other Machine in use.

Automatic Lubrication of Principal Bearings.

Driven entirely by BELTS.

Differential Speed always insured.

WEYMAN'S NEW IMPROVED PATENT

Porcelain Rolls

The BEST ROLL FOR MIDDLINGS in the world. Over 6000 in use in this country and Europe. Send for particulars.

MILLER BROS. & MITCHELL,

Nos. 110, 112, 114 and 116 KING STREET

MONTREAL.

SOLE LICENSEES FOR DOMINION.

Manufacturers of Improved Hoisting Machinery, MINING and CONTRACTORS' PLANT. Importers of BEST STEEL WIRE ROPE. Mention this Paper. 124-1y

EMERY WHEELS FOR SAW GUMMING!

Solid Emery Wheels are now almost in universal use for the purpose of gulletting and gumming saws. Statistics show from 25,000 to 30,000 saw-mills in the United States. Many of these run only a single saw each. A one-saw mill would use one or two wheels a year, costing $3 to $4 each, and when such small mills order single Emery Wheels from the factory, the express charges often equal the cost of the wheel. There was a time when the quality of Emery Wheels was so uncertain, and the demand so fickle, that storekeepers could not afford to carry them in stock. Now, however, Saw Gumming Wheels have become as staple an article as Files, and every dealer in saws, Hardware and Mill Supplies can afford to carry a few dozen standard sizes in stock. Large dealers order stocks of $500 to $750 worth at a time. Saw Gumming Wheels are used with the edge (or face) square, round or beveled. Probably seven-eigths of all in use are beveled.

The principal sizes are:

8x1/4, 8x3/8, 8x1/2 } 3/4 in. hole. 10x1/4, 10x3/8, 10x1/2, 10x5/8 } 3/4 in. hole. 12x1/4, 12x3/8, 12x1/2, 12x5/8, 12x3/4, 12x7/8 } Holes, 3/4, 7/8 and 1 inch.

Probably more wheels 12x3/8, 12x1/2 and 12x3/4 are used than all the other sizes together. Saw Gumming Wheels are used, however, of all sizes up to 24x1½. The most frequent complaint is that Emery Wheels harden the saw so that a file won't touch it. The answer is that you don't want a file to touch it. An expert workman will shape and sharpen the teeth with an Emery Wheel, leaving the teeth *case hardened*, in which condition the saw will cut about 33⅓ per cent. more lumber than a soft saw will. Those who want to use the file, however, have only to touch the saw *lightly* a second time (after going all over it once), and this second touch will cut through the case-hardened scale.

A QUESTION OF QUALITY.

Thirteen years of experience as makers of, dealers in, and actual users of Emery Wheels, have led us to a decided opinion as to what quality is the best. We prefer for almost every use an "Extra Soft" wheel like the "Pocono." We believe that money lost through the rapid wear of the wheel is more than made up by the money saved on wages. As we cannot get every one to adopt our views, we make several qualities, so as to meet their views. We say to those who think they can only be satisfied with some other make of wheels (not Tanite), that we can furnish qualities *to match* any and every other make. If you have got used to some special quality of wheel, let us know what it is, and we can send you *a Tanite Wheel of similar quality*. Our *regular* classification of Saw Gumming Wheels is as follows:

CLASS 2. MEDIUM—HARD.—This Wheel is THE STANDARD Saw Gumming Wheel all over the world. Probably seven-eighths of all the Saw Gumming Wheels used are "Class 2. It cuts fast and keeps its shape well. Some think it too hard, some too soft. We prefer the "Pocono."

CLASS 3. MEDIUM—SOFT.—The same as to coarseness and fineness as "Class 2," but a *softer*, and therefor freer cutting wheel.

CLASS "POCONO." EXTRA SOFT.—This Wheel we prefer to all others. It is both *finer* in grain and softer than either of the above. As a Saw Gumming Wheel, Class "Pocono" is specially suited to those practical and experienced Sawyers who know how to grind with a light touch, and who want a free cutting wheel that will not create much heat.

Illustrated Circulars and Catalogue, showing Cuts of Saw Gumming Machines, and Shapes, Sizes and Prices of Wheels, sent free on application.

L13

The Tanite Co. Stroudsburg, Monroe Co. Pennsylvania

CANADIAN TRADE SPECIALLY SOLICITED.

M. Covel's Latest Improved Automatic Saw Sharpener!

Is the Most Perfect Machine that has ever been Introduced into Mills for that purpose.

CIRCULAR SAW STEAM FEED!

I would also call special attention to my

Heavy Circular Saw Mills

and for STEAM MILLS, would recommend the Steam Feed, having put in several which are giving the best of satisfaction, as will be seen by the following testimonials:—

GRAVENHURST, August 20th, 1880.

WM. HAMILTON, ESQ., Peterborough.

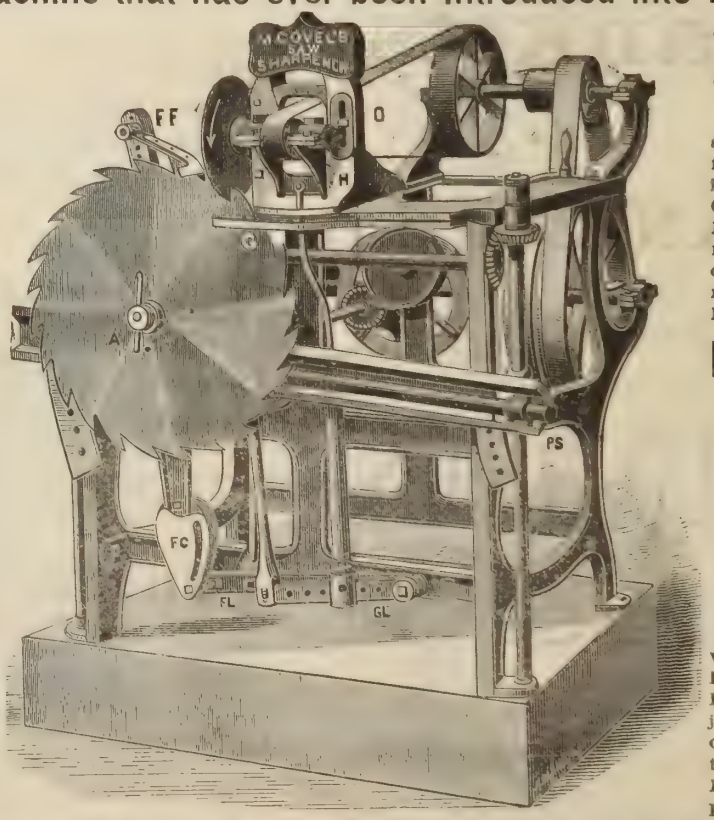
DEAR SIR—I have used your Steam Feed for near four months, and it has given me perfect satisfaction in every way; it is admitted by every person who has seen it work to be the best feed ever invented. Since I put it into my mill, I have not lost ten minutes time fixing anything belonging to it. I can cut 18 boards 13 ft. long in one minute. It can do much smoother and better work than the pinion feed. It is easily governed and reverses the carriages instantly. I am thoroughly satisfied with it and can recommend it to any person who has a Circular Saw Mill for cutting long or short logs. I consider I have cut more lumber than will pay for the Steam Feed since I got it than I would have cut had I not put it in.

Yours respectfully,
WILLIAM TAIT,
Lumberman, Gravenhurst.

TORONTO, August 11th, 1880.

WM. HAMILTON, Peterborough, Ont.

DEAR SIR—The Steam Feed you put in is working splendidly. Yours, &c.,
THOMPSON, SMITH & SON.

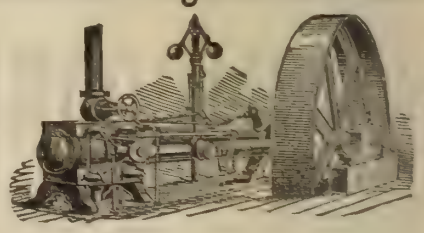


MILL MACHINERY!

I am also manufacturing Saw Mill Machinery, for all sizes of Gang or Circular Mills, Span or Double Circulars for Slabbing Small Logs. My Patent Jack Chain for drawing logs into Saw Mills, acknowledged by all to be the Cheapest and best ever got up; also, my Patent Lumber Markers, different sizes of Edgers, Gang Lath Mills, Trimmers, Power Gummers, and all Machinery used in a first class Gang or Circular Saw Mill; also, small Hand Gummers for use in the woods, for Cross-cut Saws. Rotary Pumps of different sizes, for Fire Protection in Mills, &c.

Horizontal Engines and Boilers

CORLISS ENGINES



Where economy of fuel is the great consideration, along with uniformity of speed, such as is required in Grist and Flouring Mills, Woollen and Cotton Factories, or large Factories of any kind, I supply the Corliss Engine. I feel justified in saying that our Style, Workmanship and Finish on this Engine will be no discredit to its renown, and certainly is not equalled in this country for economy of fuel. I have them working at 2½ pounds of coal per horse-power per hour.

L10

WILLIAM HAMILTON,

PETERBOROUGH, ONT.

PUBLISHED SEMI-MONTHLY.

The only Newspaper devoted to the Lumber and Timber Industries published in Canada.

SUBSCRIPTION $2.00 PER ANNUM

VOL. 1. **PETERBOROUGH, ONT., DECEMBER 15, 1881.** **NO. 28.**

THE timber and wood manufactures exported from the United States to Australia is officially given in the consular reports as follows :—

Timber, dressed	$722,227
Other	54,831
Door, sash and shutters	88,409
Shooks and staves	2,979
Total	$868,446

ARKANSAS lumber is becoming a very prominent factor in the commerce of some of the western cities. The yellow pine attains great size there, and forests of it cover about 1-10th of the State. Among other valuable woods which grow plentifully and to large proportions are several varieties of oak, the black walnut, cherry, bois-d'arc, holly and maple. Besides these the cedar, beech, poplar, cypress, hickory and ash are common. Seventy different kinds of timber grow in this state.

A HEAVY deal in hemlock bark has been made by Hoyt Bros., who are now engaged in building the largest tannery in the world on Babb's Creek, near Wellsboro, Pennsylvania. The location chosen is right in the heart of an almost unbroken wilderness. The equipments of the establishment will be complete, including six bark mills, which will grind a hundred cords of bark a day, and a large saw mill. The firm, to carry on this immense establishment, have made contracts for all the hemlock bark on about forty thousand acres of land.

THE white birch manufacture is attracting considerabfe attention in Maine. The stock is used largely for the making of spools. New mills for sawing birch are to be erected at Salem, and Scott & Hopkins, at Madrid, are using a large amount of birch in their mills, besides poplar, their stock being worked up into spools and salt boxes. This industry enables the farmers in the vicinity to make sale of timber that would otherwise have no particular value. B. F. Bachelor, of Fayette, Kennebec county, is sawing large amounts of birch, and the use of both birch and poplar in Oxford county, and other sections of the state, is becoming an important source of wealth.

THE *American Ship* says that in the case of eighteen timber and lumber laden vessels reported at Lloyd's as lost between the nights of October 12 and 17, not a life was lost. Some were water-logged and abandoned at sea, but the crews were taken off or otherwise saved. Of those abandoned some were afterwards picked up near land and brought to port. A water-logged vessel, laden with timber or lumber, though it may become unmanageable in severe weather, cannot sink, and the people aboard can take to the rigging, and thus have some change for rescue. Often the vessel and cargo are saved by a passing steamer, that takes the distressed ship in tow and brings her into port.

AN IMPORTANT INVENTION.

On Saturday last, at the Alexandra Palace, London, the first public trial was made of "Wilson's Combined Low-water and Steam Safety Alarm." The operations of the apparatus are two-fold. Firstly, to give warning of the fall of water below the water line in a boiler ; and, secondly, to indicate any generation of steam pressure in excess of the registered pressure. The alarm is constructed with an inner and outer cylinder, containing a float and valve spindle, safety valve, loading spiral spring to safety valve, and an alarm whistle. Should the water in the boiler be allowed to recede below the determined minimum low water line, the float immediately descends with it, causing a vacuum through which the steam passes into the alarm whistle, and so giving notice of the condition of the water in the boiler. So sensitive is the regulation of the apparatus that if as small a quantity as one quart of water is injected into the boiler the alarm at once stops and safety is restored. Again, on the other hand, should there be the slightest (half lb.) generation of steam in excess of the Government register, the pressure immediately overcomes the loading spiral spring and allows the steam to escape through the outer cylinder into the alarm whistle, thereby giving notice that too much heat is being used and fuel wasted. Simply opening the furnace door, or setting the engine in motion, is sufficient to overcome this neglect. The experiments were carried out by the inventor, and in every particular were most successful. The apparatus can be regulated and fixed to any size of boiler, marine, locomotive, or otherwise—at a very low cost. It is impossible for the valve to be in any way tampered with, as the outer casting is melted down, pegged, and sealed.

TERRA COTTA LUMBER.

One of the most important of recent practical inventions is that of the manufacture of lumber from fire clay, patented by Mr. C. C. Gilman, of Eldora, Iowa.

The process is fully described by his letters patent, from which we extract the following :—The composition consists of kaolin clay, free from grit, one part ; resinous sawdust, from one to three parts, as porosity may be required ; water sufficient to thoroughly incorporate the above, by machinery, into a plastic mass.

Removed from the grinding tubs, where it has been ground, the spongy product is forced by plungers driven by steam through iron or steel cylinders to express the superfluous moisture therefrom, and issues forth in the shape of long blocks or logs, of length, form, and size best fitted for handling, usually eight to twelve inches in thickness, and four to six feet in length. When sufficiently dry to render handling safe, these logs are moved into kilns or clamps calculated for the purpose. After the steam and vapors are driven out by a slow, steadily increasing fire, the temperature is rapidly increased to nearly a white heat, which not only consumes the sawdust, but brings the clay itself into the first stages of vitrifaction. On cooling, the logs are removed to the mill and sawed into planks, boards, and dimension stuff, as lumber from wood is manufactured, and subsequently fashioned in the workshop into such forms and articles as are demanded by purchasers. This material, being free from grit and tough in texture, can be cut, sawed, bored, planed, and carved with edged tools, and before or after such treatment can, after slipping and glazing, be submitted to a second firing, with fine results in ornamentation obtained.

Kaolin is the upper stratum of fire or feldspathic clay beds, and owing to the absence of sand or free silica is unsuited to common pottery uses, as its warpage in drying and firing unfits it for moulding purposes.

Mr. Gilman's invention overcomes this trouble, inasmuch, as the material is reduced to form with edged tools *subsequent to firing.*

New York's greatest present want is a fireproofing, cheap and undoubted in its capacity for every emergency. Her stately ten-storied buildings can in a conflagration receive but little aid from the fire department, especially when Croton is as scarce as it is now.

Terra cotta lumber is indestructible by fire, gases or acids ; it is a poor conductor of heat, sound, and electricity ; and possesses molecular attraction to an extent which allows of plastering without first lathing.

Its weight is one-half less than common building brick, and it is erected with nails instead of cement and mortar, virtually rendering fireproofing a work of carpentry instead of masonry as heretofore. Mr. C. C. Gilman's present address is room 71, No. 71, Broadway, New York. —*Scientific American.*

THE TIMBER SUPPLY OF EUROPE.

From an approximate summary of the timber production and trade of Europe, as given by the *Journal of the Agricultural Society of France,* may be drawn some lessons, which may be of benefit in showing the dangers threatening our timber supply, and the advantages of an intelligent public policy of preservation. A man in business cannot be expected to sacrifice himself for the benefit of posterity, but the government should see to it that such great resources should not be sacrificed in one generation. The policy of Austria has also a counterpart in that of this country. Sweden and Norway have exhausted their oak as we have almost our walnut, and, according to the *Journal.* their pine is going the way of ours, The following are the figures given by the paper mentioned above :—Sweden and Norway, which still do a large export trade in deals, are now compelled to buy their oak in Poland ; and in Russia the forests along the shores of the Baltic, in Finland and in the southern provinces, are so rapidly thinning that the forest acreage of the empire is now only one in ten. There are about 34,000,000 acres of forest in Germany (of which 20,000,000 are in Prussia), estimated to be worth £500,000,000, and bringing in an income of £10,000,000 per annum. The state forests are taken great care of in all parts of Germany, in Prussia alone £100,000 being spent every year in replanting ; yet the imports of timber exceed the exports by over 2,000,000 tons. The oak and the beech are the kind of trees which do best in Denmark, but the timber trade of the country is very small. Austria and Hungary have upwards of 43,000,000 acres of forest ; but in Austria proper the state does not possess more than seven per cent. of the wooded area, as owing to the wasteful policy of the Ministry of Finance from 1855 to 1872 more than 5,000,000 acres were sold for sums so far below their value that there was a popular saying in Vienna, "If you want to become rich, buy state forests." The speculation came to an end in 1873, but Austria is now obliged to buy most of her timber in Bosnia and Montenegro. Servia and Roumania have some very fine forests ; but Italy, though her forest area extends over nearly 14,000,000 acres, does not do much in the way of a timber trade, as the roads leading to the forests are so bad that it is almost impossible to move the timber when cut. Much the same is the case with Spain, which has 8,500,000 acres of forest ; while Portugal, which has only 1,000,000 acres, finds a good market for her timber. Sweden and Norway export about £32,000,000 worth of timber every year, and at this rate their fine forests will soon be exhausted.—*Northwestern Lumberman.*

New Use of Buffalo Skins.

An inventor proposes to make machine gear wheels of raw buffalo hides by cementing and pressing together as many layers as are required for the breadth of the wheel. The blanks thus prepared are cut to form the teeth in the usual manner with suitable tools. The advantages claimed are smooth and noiseless action at high speeds and greater durability without lubrication.

River Improvement.

The Belleville *Intelligencer* says that at the forthcoming session of the Legislature application will be made—on behalf of the lumbermen, we presume—for power to erect dams on the streams in the townships of Tudor, Madoc and Marmora, for the purpose of storing water to facilitate the driving of saw logs, etc. Would it not be possible to form a company for the improvement of the river, with the object of furnishing water power continuously to manufactories here, to enter into this scheme with the lumbermen and so to attain the desirable object herein indicated ? We commend the matter to the attention of all who are interested.

SHARP PRACTICE.

As we published the sensational account of the asserted timber discoveries by Mr. W. Mercer, C.E., we now give the other side of the story. The *Northwestern Lumberman* says:—

It is not uncommon for scheming to pay. In fact it often pays better than business that is conducted openly, as is proved by every day transactions, and it is not unlikely that a piece of very adroit business that has for some time been going on in pine land circles has rewarded the men who were conducting it very handsomely.

About a month ago, as the readers of the *Lumberman* will remember, we published the statement of Mr. William Mercer, a civil engineer, of Bay City, Mich., who had recently returned from the Spanish River district, Ontario, to the effect that he had discovered in that region a genuine lumberman's paradise. There were seas of pine, stretching beyond any government surveys even, and, according to the stories of the Indians, hundreds of miles beyond them.

While we hoped that the story might prove true, we could not swallow it without a grain of allowance. Experience has educated us up to that point that we look with suspicion upon any report of an immense timber find. To ascertain about the timber supply of the country it is not necessary to go up in a balloon, or down into the bowels of the earth. It is easily enough gotten at by a man sufficiently interested to be at the pains. There are a great many men in this country with plenty of money in their pockets, and who understand all the conditions governing timber as regarding its value for lumber, who have hunted timbered land, particularly pine lands, pretty thoroughly. We have so much faith in their knowledge of the situation that when we hear a report of a prodigious discovery of pine, right at home, we suspect at once that there is a Munchausen element in it, a suspicion that, in these late days, has never proved unfounded.

Mr. Mercer gained the ears of some gullible newspaper men of this city, and a statement of the big find was given to the world. This, on the face of it, had a bad look. It is natural enough for a man who has made a great discovery to let it be known through the press, providing it would not be more profitable to keep it to himself; and the influence of the press is often the first thing desired by a person who has a scheme on hand. It helps him wonderfully, if he succeeds in gaining it.

Mr. Mercer is an old-time lumberman, and has a host of friends among the craft in Michigan. Those friends well know that the pine of their own state is rapidly disappearing. They were born and bred to the business of lumbering, and know no other. It seems a trifle out of the natural run of things that the Canadian explorer, instead of informing his friends of his valuable discovery, should come to Chicago and disclose it to newspaper men, when he knew all the time that they would go right off and tell of it. We wondered at the time that he did not whisper it in the ears of his friends who could profit by it. The region was the richest in pine the gentleman had ever seen, although he was conversant with the trees of the cork variety that once grew on Cass river, and yielded a fabulous per cent. of uppers. This pine could be bought cheap; no doubt of that. It belonged to the Ontario Government; the Government did not even know of its existence, and an individual or government that is not willing to sell cheap what it does not know it has, is a poor financier. This is one of the phases of the great pine find that begat suspicion.

It was somewhat strange that the Provincial Government had no knowledge of such Crœsus-like possessions, but we excused it on the ground that so many of its young men migrate to the United States that there are not enough active men—such as can stand a tramp through the forests—left behind to find out what there really is in their country, covering the vast territory that it does.

We went to work, however, and it did not take a great amount of it to learn that the Ontario Government knew more than Mr. Mercer gave it credit for knowing. It had run its surveys around promiscuously in the great pine country. Possibly there was a strip of land from 50 to 100 miles long from east to west, and very narrow, upon which the stakes of the surveyors had not been driven. The unsurveyed country is not more extensive than that indicated above, and the chances are against such dimensions. Then, again, somewhere away up in the unknown region, there is a settlement, and even a saw mill. The Indians had probably lied to Mr. Mercer.

Unless a leak is stopped it usually increases. This one grew larger and larger all the time. Every day, almost, brought evidence that Mr. Mercer, either knowingly or unknowingly, in giving a report of his discovery to the press, had favored the interests of parties who had land to sell in the Laurentian region. If he did not know it, it is likely to prove a happy stroke of luck to the men who owned the land.

It has transpired that a good while before Mr. Mercer discovered the bourne from whence no lumberman would ever wish to return, on account of the fine pine everywhere abundant, it was discovered by somebody else. Mr. George N. Fletcher and other parties, of Alpena, Mich., discovered it a year ago, and doubtless other parties discovered it several years before they did. At any rate somebody owned a half dozen or so limits up there, and wanted to sell them. The Alpena parties purchased them at a cost of something like $21,000. We do not assert that these limits were on the ground talked about by Mr. Mercer; but if there should happen to be, right adjoining those limits, other territory rich in the material of which lumber is made, those same limits might be more valuable than they would otherwise be. That is natural enough. A mine right by the Comstock lode would sell for more than though it were located in the Alleghanies. That is a business principle.

It furthermore seems that the Alpena gentlemen, for some reason, got sick of their bargain. In common parlance they had got "stuck." To start with, as it will be seen further on, they paid a pretty good price for their limits. We do not know what they intended to do with the timber upon their purchase, but as they own large mills at Alpena, it is supposable that they expected to float the logs home, and saw them there. They ought to have known it before, but come to think of it, they would be required to pay seventy-five cents per thousand, crown land dues, and this assessment, it is plain, would be an addition worth mentioning, to the original outlay.

A craze for buying Canadian forests must have struck that portion of Michigan, for other Alpena lumbermen got a scent in the same direction. One gentleman contracted for some limits over there that were guaranteed to produce 150,000,000 feet, running 15 per cent. to uppers. It was denominated a fine chance to do a lumber business, but on looking the ground over he found 10,000,000 or 12,000,000, instead of 150,000,000, and a country full of ranges of rocky, steep hills and lakes. As it would cost more to get the timber out than it was worth, he sensibly declared the contract off.

It might have been owing to some such reason that his neighboring lumbermen found out that they had bought a cat in a sack. Mr. Mercer asserts that the country is well adapted to lumbering, and the Spanish river a good driving stream, but in this respect maybe the Indians had lied to him again. However, it was for some reason that the owners of the limits desired to sell them, for they approached Mr. A. N. Spratt on the subject. Mr. Spratt is a shrewd pine land operator, and, of course, refused to take the bonanza upon hearsay, but said he would investigate, so last summer he made a trip to the unknown region, and discovered it again. He ascertained that the Spanish river region is a poor one to carry on logging operations in, as the country rises to high elevations as you go back, giving to the streams, of course, numerous heavy falls. This examination led Mr. Spratt to refuse to buy the white elephant that was on the hands of the Alpena lumbermen at any price. Nothing daunted, another effort was made. Judge Tuttle, of Alpena, and Mr. Croyer Davison, of Harrisville, were applied to, to make the sale of the limits, with a strong probability of being successful, as, at time of writing, negotiations are being made with New York parties, the consideration being $100,000

It is for the New York parties to rise and explain, providing they have a mind to, what they know about these limits. Of all men in the world, eastern men are the ones that land sharpers like best to get a hold of. A great many eastern men have money, and are on the alert to profitably invest it. To many of them pine land is pine land, which ends their knowledge of the subject. We are ready to wager a very small sum that these New York gentlemen know no more about the lands they propose to buy, if they have not already bought them, than an infant knows about the north pole. We make this statement, for it seems reasonable to us that if their knowledge was very extensive in that direction they would give more not to own the limits in that district than to own them. But if they have sinned in this regard they have company, and that is a consolation often. Not long since a land shark entered what he called pine lands, in the Lake Superior district, without having seen them, and immediately sold them to New York gentlemen, without them having set eye or foot upon them, so as to double his money. They will learn, if they have not already done so, that their "pine lands," purchased as an investment, could not be given to a practical lumberman in the Superior district.

In looking up the facts connected with Gulliver Mercer's great discovery, we learned that a Chicago pine land operator had been bit by the the same shark. The trap was intended this time to be sprung by Toronto men. They had discovered the unknown country, and had limits in it to sell. They represented them as rich beyond description, and when the Chicago men had obtained their price, and the estimated production, he figured up that the timber would represent fourteen cents per thousand feet. Such a rare chance could not be overlooked. It was veritably "a soft snap," and at an expense of $1,000, or thereabouts, experts were sent to the Spanish River district to investigate. The result, in the light of present events, is very amusing, and it may be proportionately profitable to people who are contemplating making their fortunes in the lumber business on the much talked of river.

The trip was made up the river in a light draft steamer, drawing from three to four feet of water. Canoes were then resorted to, and in the first three days only fourteen falls, from twenty to eighty feet high, had to be got around. It was a perilous attempt, and could not have been accomplished except that the exploring party had professional guides. There is some pine above the falls, and some years ago a daring spirit discovered the country and cut a lot of logs up there. There was no way to get them down but by water, and he set them afloat. They ran over one fall after another, but the strain was more than they could bear, and when the owner last saw them they were literally smashed up. Some were made brooms of, and the others were broken in two. To this day when a bluish mist surrounds the hills away up the Spanish River, it is believed it is due to an oath, that has just taken shape, ejected by the foolish lumberman.

Before starting, the guides told this pine land hunting party that their efforts would avail them naught, for there was no pine to speak of on the river, but the party, believing that the guides had been hired to tell such a story, went on their way, and found—pine, in limited quantities, but it must go, if it ever goes anywhere, to Hudson Bay. The same party also met the Canada Pacific railroad surveyors, also spoken of by Mr. Mercer, who gave the discouraging information that nowhere along the line of the projected road is there pine in great quantities. The experts were glad to return alive, and, used to roughing it as they are, pronounce it the most dangerous trip they had ever undertaken. There are Grand Rapids, Mich., landlookers who can give similar testimony, if needs be.

From a Bay City, Mich., paper we learn that one of the Alpena owners of the limits, of which we have been writing, called at the office of that paper and said that his land was not included in the Mercer find. Nobody has said it was; but one would suppose, taking Mr. Mercer's word for it, that a man would feel proud to have the great, recently discovered country include his pine lands. It is not often, under any circumstances, necessary for a denial to precede an assertion, and this effort to make a mouth-piece of the Bay City paper looks wonderfully like a hedge against the expose already made by the *Lumberman* of the Mercer discovery.

No one, after reading this history of the latest Canadian explorations, especially if it should be learned that the New York parties have passed over their $100,000, will doubt that there are pine land operators who have the ability to worm themselves out of an uncomfortable position when they find that they have put their foot in it.

SALE OF LIMITS.

The following are the details of the recent sale of timber limits in the Muskoka and Parry Sound districts:—

Berth.	Square miles.	Purchaser.	Price per mile.
MOWAT TOWNSHIP.			
No. 3	18¾	T. G. Blackstock	$50
No. 4	12¾	"	85
No. 5	19	C. J. Braton	95
No. 6	12¾	T. G. Blackstock	155
BLAIR TOWNSHIP.			
No. 3	27½	J. Keating	1[illegible]
No. 4	27½	T. G. Blackstock	360
M'CONKEY TOWNSHIP.			
No. 1	21¾	Cook Bros.	1,050
No. 2	16	J. M. Martin	2,525
No. 3	22	Mossom Boyd	558
No. 4	18½	D. Moore	600
HARDY TOWNSHIP.			
No. 1	17¾	A. Bacel	[illegible]
No. 2	15½	R. Harris	520
No. 3	20¾	J. M. Martin	1,[illegible]00
No. 4	22	C. Cameron	[illegible]
PATTERSON TOWNSHIP.			
No. 1	41½	A. Hill	[illegible]
No. 2	19	McArthur Bros	1,120
No. 3	21¾	J. Petrie	[illegible]
No. 4	32½	R. Jaffray	[illegible]
No. 5	25½	R. Nagle	[illegible]
MILLS TOWNSHIP.			
No. 1	23½	J. A. Baron	[illegible]
No. 2	12	M. Brennan	[illegible]
No. 3	18	C. A. Brough	[illegible]
No. 4	17	E. Evans	[illegible]
SINCLAIR TOWNSHIP.			
No. 1	16¾	J. Henderson	[illegible]
No. 2	18¾	J. Cockburn	[illegible]
No. 3	14	Cook Bros	[illegible]
No. 4	14	McArthur Bros	[illegible]
BETHUNE TOWNSHIP.			
No. 1	23½	Cook Bros	[illegible]
No. 2	17¾	McArthur Bros	[illegible]
No. 3	12½	"	[illegible]
No. 4	12½	"	[illegible]
PROUDFOOT TOWNSHIP.			
No. 1	17	R. Carnegy	[illegible]
No. 2	23¾	A. Hill	[illegible]
No. 3	15½	McArthur Bros	[illegible]
No. 4	12½	J. Cockburn	[illegible]
GURD TOWNSHIP.			
No. 2	25½	J. J. Kidd	[illegible]
No. 3	13	R. Nagle	[illegible]
No. 4	13½	J. Petrie	[illegible]
MACHAR TOWNSHIP.			
No. 1	18¾	J. A. Baron	[illegible]
No. 2	21	J. L. Burton	[illegible]
No. 3	18	A. McDougall	[illegible]
No. 4	13¾	H. H. Cook, M.P.P	[illegible]
STRONG TOWNSHIP.			
No. 1	19½	H. H. Cook	[illegible]
No. 2	13½	McArthur Bros	[illegible]
No. 3	18½	J. Murray, M.P.P	[illegible]
JOLY TOWNSHIP.			
No. 1	18½	J. L. Burton	[illegible]
No. 2	24½	C. E. Romaine	[illegible]
No. 3	18½	J. Bonfield	[illegible]
No. 4	14	R. Harris	[illegible]
LAURIER TOWNSHIP.			
No. 1	17¾	R. Nagle	[illegible]
No. 2	22½	T. Murray, M.P.P	[illegible]
No. 3	19	T. Murray, M.P.P.	[illegible]
No. 4	12½	T. Murray, M.P.P.	[illegible]
PRINGLE TOWNSHIP.			
No. 1	24¾	McArthur Bros	[illegible]
No. 3	13½	W. H. Burnett	[illegible]
No. 4	17¾	R. Thomson	[illegible]
LOUNT TOWNSHIP.			
No. 1	17¾	F. L. Stuart	[illegible]
No. 2	22½	J. C. Miller, M.P.P	[illegible]
No. 3	18¾	H. H. Cook, M.P.P	[illegible]
No. 4	17	H. Spohn	[illegible]
NIPISSING TOWNSHIP.			
No. 1	17¾	R. Nagle	[illegible]
No. 2	18	T. Smith	[illegible]
No. 3	17	T. Mackay	[illegible]
No. 4	18¾	C. A. Brough	[illegible]
HUMSWORTH TOWNSHIP.			
No. 1	23½	R. Nagle	[illegible]
No. 2	22	D. Moore (Ottawa)	[illegible]
No. 3	16	J. R. Booth	1,110
No. 4	12	J. S. [illegible]	240

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3rd. Eight million feet of saw-logs now in Black River.

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If not sold at private sale, the above will be offered to the highest bidder at some future time to be named, as I intend to close out and concentrate in Michigan, where I now have mills.

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175	" do	1 x 12	"
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40	" do	2 x 10	Joists.
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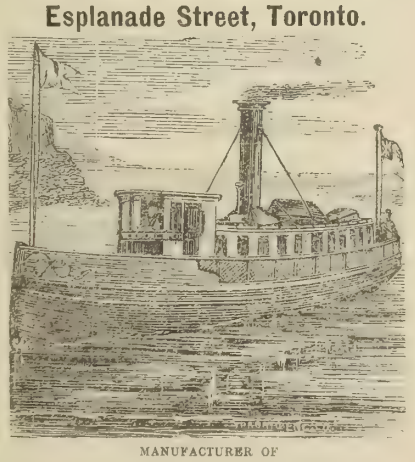

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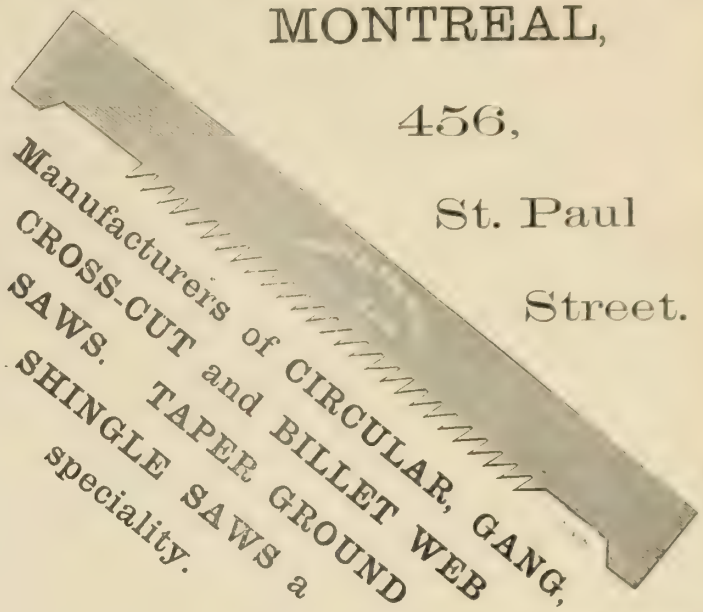

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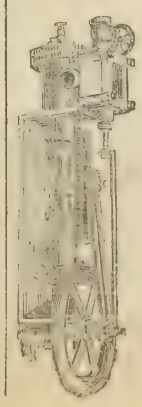

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CEDAR AND HEMLOCK.

The value of the coarser products of the forest has not been well appreciated in the Northwest until quite recently, and even now not all of them are recognized, or their utility and commercial importance apprehended. It is but a few years since cedar was thought worth the labor of cutting; and a distant transportation, except for such trees as were suitable for telegraph poles, was considered out of the question. Now, however, a cedar swamp at all contiguous to avenues of commerce, is esteemed of a value fully proportioned to that of the coarser varieties of pine, and in place of this timber being monopolized by the telegraph companies, it is utilized for fence posts, and is found fully the equal of oak for durability. The Chicago market alone has handled this year 3,000,000 pieces. The railroad companies, also, have discovered that cedar ties, while light of carriage, and consequently comparatively cheap in the matter of transportation, make a valuable and durable tie, well suited for a prairie country, and over 4,000,000 pieces, enough to lay the iron for 1,500 miles of track, have been brought to the docks of Chicago, during the past season of navigation, for distribution throughout the country west of this point.

Thus, almost worthless, as it was considered, white cedar has contributed more than $2,000,000 to the business of Chicago during the season of 1881, and, doubtless, were the statistics of the entire Northwest available, it could be shown that the forests of the states of Michigan and Wisconsin, with perhaps a small quantity from that portion of Canada which borders on the great lakes, have aggregated, during the present year, a production of the value of fully $5,000,000 from this same source.

The value of the hemlock forests of the Northwest has not yet adequately dawned upon the minds of those who own large tracts of it, which a foolish and short-sighted lack of appreciation is permitted to go to destruction, while it yields but a tithe of the financial benefit which it is capable of affording. The hemlock forests of Maine, New York and Pennsylvania are made to yield a revenue somewhat commensurate with their actual value; but those of the Northwest are permitted to go to destruction, with scarcely an effort at obtaining a compensation for the labor of destroying them. In the former states the tree is made to yield a revenue from its bark, which forms one of the most valuable tanning commodities known the world, and its value has been fully recognized by the denizens of the old world, as shown in the fact that England, France and Germany export vast quantities of raw hides to the eastern states of America, to be treated with this valuable tanning property, and returned to the respective countries whence they came, when, after a further treatment, by a process peculiar to each nation, a no inconsiderable proportion of the leather again finds its way to the United States for final consumption.

But the hemlock tree of the East has not fully ended its mission when it has yielded up its bark to the tanner, and the trunk finds its way to the saw mill as a timber second in value only to white pine, for a large portion of the uses to which the coarser grades of pine are adapted. The silly prejudice which is exhibited in nearly every section of the western country against the use of hemlock as a building material, is in marked contrast with the high esteem in which it is held in all the eastern states for all the uses included in the category filled by dimension sizes. Eastern builders of large warehouses, having their choice between the use of white pine and hemlock, almost invariably choose the latter, from its greater stiffness and strength, knowing that its durability is unquestionable in all points in a building where it is free from visitations of wet and dry. A western builder, on the contrary, although able to obtain hemlock at a reduced price from the cost of pine, invariably rejects it, and refuses to have it placed in his building, simply because he does not know anything about it, and thinking that he does know all about pine, will permit quick rotting sap to be placed where sound hemlock would outlast it, two to one. The farmer of the West would pay one-third more for pine boards with which to build his granaries, notwithstanding that the advantages of hemlock in excluding rats and mice would often save the price of the building in waste alone, before it had been in use three years.

The forests of Michigan and Wisconsin, as well as those of Canada, abound in scattering hemlock, and at least 1,000,000,000 feet of good timber is in those localities stripped of its bark each year for local tanning purposes, while the trunks of the trees, which might be utilized in the manufacture of valuable lumber, and at an expense greater than would be incurred in bringing them to a saw mill, are tumbled into a log heap and burned to get them out of the way. It is but a few years in the future when hemlock timber will assume the position in the West which it already holds in the East, and those who now so ruthlessly destroy it will come to think of it as did many, regarding the pine, black walnut and oak, which a quarter of a century ago were cut down and burned to get them out of the way.

The forests of the old world are almost wholly denuded of their tanning materials, and what is left is guarded with jealous care. The hemlock resources of the eastern states are becoming so limited as to receive a marked measure of watchfulness; those of the Northwest are yet abundant, and it behooves their possessors, in view of the recent discoveries which enable the bulky bark to be compacted into economical shape for transportation even to Europe, to conserve and and protect this valuable timber, which in many respects is more available to the uses of man, and possesses an economic value of greater extent than the pine. The latter is of the greatest value, as a firm building material, in which it will always prove superior to hemlock or any other timber, but it is valueless as to its bark, or even as railroad ties. The hemlock, on the contrary, as a coarse building material, is in every respect equal to pine, its limbs, when of sufficient size, are available and valuable for the manufacture of ties, while its bark has no superior as a tannin. Let those who now control the hemlock forests of the Northwest learn the lessons of its value, as taught them by the denizens of the old world, and of the eastern states of our own country.—*Northwestern Lumberman.*

NEW BRUNSWICK EXPORTS OF WOOD.

The *Monetary Times* says the export of sawn lumber and square timber from the port of St. John forms at all times an interesting feature of our trans-Atlantic trade. This year's shipments continue to be principally made by the same parties as in former years. During October, however, a larger proportion appears to have gone to the Continent of Europe. The October statement shows that out of a total export of 18,489,000 feet of deals, battens and ends, 2,738,000 feet, or about 15 per cent. went direct to the Continent, forty per cent to Liverpool, and thirty-five per cent to London. The remaining tenth was shipped to Irish and other ports in the United Kingdom. The number of vessels despatched for the month was 25, of an aggregate tonnage of 11,437. These carried, in addition to the deals, &c., already mentioned, about 360 tons of birch timber and 967,000 feet of scantling, boards and palings. The leading shippers were, in order, Alex. Gibson, R. A. & J. Stewart, Guy, Bevan & Co., W. M. Mackay, and we perceive in the list the name of the Spool Manufacturing Co. of Peticodiac, as shippers of 110,000 feet, mainly deals and battens.

The lumber and timber shipment of the season from St. John to ports across the ocean, *i. e.*, for the ten months from the beginning of the year to the end of October amounts to 179,000,000 superficial feet of deals and boards, 3,969 tons of birch timber, and 806 tons of pine timber. These are classified as under:—

LUMBER.	
Deals, battens and deal ends, sp. ft.	172,974,735
Boards and scantlings sp. ft.	5,756,285
Palings, pieces	395,000
TIMBER.	
Pine timber, tons	806
Birch, tons	3,969

Of the timber, 2,938 tons of birch and 743 tons of pine went to Liverpool, 1,002 tons of birch to Carnarvon, and the remainder to Dundalk, Wexford, and Waterford. Of the lumber, about 26,000,000 feet went to Bristol Channel, nearly 20,000,000 feet to the Continent, 7,700,000 to Scotland, 1,200,000 to Australia. But 77,000,000 feet, or about 43 per cent. of the whole, was destined for Liverpool and London. The proportions shipped to various ports are shown by the following list:—

	Ft. deals, &c.	*Ft. boards, &c.*
Bristol Channel	24,985,096	1,180,217
Continent	19,683,334	206,281
Glasgow	7,082,239	296,576
Queenstown	1,232,549	37,674
Liverpool	59,494,763	3,096,621
London	14,523,905	597,496
Belfast	5,578,064	....
Dundalk	1,584,694	....
Limerick	2,420,091	....
Londonderry	3,952,918	....
Fleetwood	446,008	....
Waterford	866,083	....
Sligo	405,793	....
Wexford	679,977	....
Newry	1,721,570	1,167
Drogheda	767,119	....
Carnarvon	560,669	....
Cork Quay	6,689,903	52,455
Portrush	874,201	....
Dublin	7,983,444	20,488
Westport	633,294	....
Bantry	426,662	....
Galway	546,795	....
Africa	1,009,331	114,324
Mumbles f. o.	702,513	11,977
Warrenpoint	1,078,647	....
Ayr	415,115	....
Australia	1,205,804	82,607
Dungarvan	422,659	....
Faversham	689,983	1,088
Wicklow	314,540	....
Plymouth	440,546	....
Clare Castle	315,624	....
Hare Island	567,739	....
Barrow	1,390,794	54,946
	172,974,735	5,756,285

THE LUMBER BUSINESS IN AUSTRIA.

The following interesting letter appears in the *Northwestern Lumberman*:—

MOKRE, POST SZCZAWNE, GALLICIE, AUSTRIA, October 26, 1881.

Doubtless this letter is written by one of your most distant readers, but coming, as it does, from the Carpathian mountains, now the most important forest region from which the middle European lumber markets receive their supply, it may contain some items of interest.

The greater part of the woodland in this country is fir and pine. There are also large quantities of oak and maple, and considerable beech. As the principal woods are fir and pine, all my remarks about the lumber business will have reference to those two kinds. The lumber in this country is counted by the cubic foot, but the following statements refer to English square feet, and the prices are reduced to your money standard.

The saw mill business in this country, as compared with that of America, is much behind the times. The wealth of wood is immense, although when timber is bought in large quantities it is very cheap, selling at from fifty to eighty cents per thousand feet. Wages in the Carpathian mountains are very small, ranging from fifteen to twenty cents per day. The saw mill man here does not generally make much money, but it is his own fault, and is owing to his old-fashioned, expensive way of operating.

There are some mills here with eight and nine gangs, although the majority of them have but three or four, and as many small circulars, with benches for edging boards or cutting lath. The maximum capacity of such a mill is from 15,000 to 20,000 feet in twelve hours; but as the gangs need a great deal of repair, from 12,000 to 15,000 is a good average. Such mills cost from $20,000 to $25,000.

The logs are mostly brought to the mills on waggons, and it is seldom one sees rollways, drives, etc. The reason for this may be that wagonage is very cheap, running at from fifty to eighty cents per day for a two-horse team, though the work is often so meanly and unsteadily done that half of that money is too much to pay for it. For cutting down the trees and working them up into logs the price is forty-five or fifty cents per thousand feet. The cost of bringing logs to the mill is from $1 to $2 per thousand feet. The cost of cutting the logs into boards is usually $2.50 per thousand feet, though it is sometimes $3 and $3.50.

The average price of first-class lumber is $8.20; for second class, $7, and for third-class $5.50. Most of the mills work, with small capital, and are obliged to buy the wood in small quantities and pay from $1 to $1.40 per thousand feet for it.

I am sure that the cost of production, as well as that of bringing the logs to the mills, by proper management, could be reduced one-half, and that an American saw mill man, with ample capital, and a well-arranged mill, could do a very good business here. There are enough American oil men in this country looking up business, but I believe that lumbermen would find a more profitable field for their business.

Should any of the readers of the *Lumberman* wish to learn more of the state of the lumber trade here, I will answer any enquiry with pleasure.

FRED BADER.

THE DULUTH LUMBER CO.

The Lake Superior *News* says this is the title of a new lumbering concern that proposes to take a large share in the development of Duluth's manufacturing industries. This company is organized under a charter from the State of Illinois, and will have an office in Chicago as well as in Duluth, though its main business will necessarily be transacted in the latter place. The officers are, S. K. Martin, President; R. L. Henry, Treasurer; Geo. Green, General Manager, and H. B. Moore, Secretary, the last two gentlemen having their office in Duluth. The capital stock of the company is $300,000, and a portion of this sum is already being invested in a saw mill, now well under way. The piles for the foundation are all driven, the mason work largely completed, and the framing also well advanced. The mill is to be 160x54, with a wing 31x64, and the engine room 64x50. Six boilers will run the huge engine, which will have 500 horse power.

The mill will be supplied with a circular saw and also a gang, with edgers, trimmers, steam feed, and all the latest improved machinery, and will have a capacity of 100,000 feet per day. The mill will be in readiness for business by the opening of navigation next spring, and already the proprietors have contracted for 25,000,000 feet of logs, part to be cut on the St. Louis river, and part on the South Shore.

Mr. H. B. Moore, the secretary of the new company, has been in Duluth for a year or more, and is reported to be thoroughly posted in all branches of the lumbering business. Mr. George Green, the general manager, is a new comer, but the fact that he holds such a position in this strong corporation is a guarantee that he is a competent business man. Duluth may consider herself fortunate in securing such an addition to her lumber firms as the Duluth Lumber Company.

A RESTIGOUCHE SPOOL FACTORY.

The Spool Factory of Messrs. C. G. Beckwith & Co., at Jacquet River, Restigouche County, which was destroyed by fire a short time ago, is being rebuilt and will be ready for operations in a few weeks. The new building will be a much more substantial structure than the former one, and better adapted for the purposes for which it is intended in many respects. The main building is 150 feet long by 36 feet wide, and has 14 feet posts, with rafters 36 feet, which gives it a very heavy, steep roof. This is to prevent snow from lodging on it, which caused a great deal of trouble to the former building last winter, often endangering the roof. Besides the building, the dimensions of which are given above, there are the boiler and engine house in connection with it on the north side, and another building 80 feet in length joined to it at the east end, which is intended for kilns, etc. On each side of the roof of the main building are two rows of windows, built dormer fashion, which light the upper story under the roof, so that the whole building is as convenient and well lighted as if it were really a two storey one. A blacksmith shop, a large cook house and several dwelling houses stand near it, forming the nucleus of a village. The site of the factory is on a branch of Armstrong's Brook, about two miles from the I.C.R. station at Jacquet River. Great quantities of spool birch, of excellent quality for spool making, grow in this district. Thirty or forty men are

at present employed in the work of construction; but the number of hands kept at work when the factory is in operation exceeds this considerably. A great deal of employment, too, is given to farmers in this neighbourhood hauling wood to it during the winter. The new settlement around the factory is to be called Beckettville. —*St. John, N.B., Sun.*

SHEER BOOMS.

During the past season the sheer booms introduced by Mr. L. W. Pond, of Wisconsin, on the Upper portion of the St. John River and its tributaries, have been subjected to a practical test, which has demonstrated their usefulness in a high degree; in fact, the sheer booms have revolutionized the running of logs down river to the rafting grounds of the Fredericton Boom Co. Till the introduction of Mr. Pond's invention, the logs, set afloat by the spring freshet, helplessly followed the course of the current down stream, and were, as the water fell, or through the action of the wind, deposited by thousands on bars and heads of islands, and, where the shores were low, were scattered in land over miles of intervale, from which their removal often cost more than the logs were worth, besides subjecting the company to damages for injuries done to the meadow lands. The work of following the drives down and sacking the shores was therefore one of the most expensive portions of the river operations. Pond's sheer booms have practically cut this down to a minimum, the *modus operandi* being as follows:—Sheer booms are placed at the heads of the islands and shoals, and wherever the set of the current would carry the logs over the low banks, at such angles that the logs striking against them are shot out again into current and so carried on successively past each old resting place in safety to Fredericton. In this way the main drive is kept moving while the water is high and all the logs are got to market; whereas, under the old method, a sudden fall of water would leave the shores and out of the way lodging places lined with thousands of logs. Full advantage can also be taken of a sudden rise of water in midsummer or fall, to rush through logs that had been hung up earlier in the season. The extraordinarily large run of logs during the past season proved, beyond doubt, the great benefit these booms are to the lumber operators along the upper St. John; and this test will doubtless have the effect of introducing them on other rivers in the Province. Mr. Pond is now arranging to put his sheer booms on the Restigouche next season, with every prospect of success; and it is not unlikely that, at no distant day, they must be working on the Miramichi.—*St. John, N.B., Sun.*

THE DURABILITY OF REDWOOD.

Mention was made in a recent issue of this paper of the suitability of redwood for wine casks. Messrs. Fulda Brothers, of San Francisco, tells us that redwood casks have been used in California for many years; indeed, two thirds of the vast wine crop of that State is fermented and stored in casks and tanks made of this timber. The casks simply require to be slightly steamed and well soaked to remove the color; after that the fermentation of the wine does not extract any color or taste.

The trade in redwood is becoming of considerable importance, a great deal being shipped eastward to Denver, Omaha, Kansas City, and the Atlantic coast as far as Rhode Island.

The wood is specially valuable in situations which occasion rapid decay in other timber. Seventy years ago the Russian Fur Company erected a redwood stockade at Fort Ross, Alaska. The posts were cut down level with the ground some years ago, but the buried parts remain perfectly sound, excepting the thin layer of sapwood near the bark, the alternate soaking and drying of seventy years having no injurious effect upon the heart wood. A piece of one of the posts, with a certified statement of its history, was sent to San Francisco a few weeks ago. The sender, Mr. G. W. Coll, of Fort Ross, states that he knows of shoots from old stumps which have grown to be three or four feet in diameter in forty years, indicating wonderful restorative power in redwood forests under favorable conditions.

The redwood in demand in California for underground uses is what is known by the lumbermen as "black-hearted redwood." It shows a dark color when cut with a knife, the the outer layer only becoming "seasoned." "Black-heart" is exceedingly heavy—too heavy to float. One who has observed schooner-loading at chutes along the coast tells the *Pacific Rural Press* that a post of this wood which plunges overboard never rises, and a board lingers on the surface a moment and then slowly slides down into the depths. This is the sort which is sought for in foundations, and under brick walls is believed to be imperishable.—*Scientific American.*

A New Species of Horses.

The *Annals and Magazine of Natural History* for July contains a translation of a Russian paper, in which M. Poliakof brings forward a mass of evidence in proof of the existance of a hitherto unknown species of horse, not far from Zaisan, in Central Asia. The animal appears to resemble a small domestic horse, of a dun color; its head is large in proportion to the size of the animal; and the root of its tail is destitute of long hairs for some distance. M. Polikof names his supposed new species *Equus Przewalskii*, in in honor of the traveler who brought the skin to Russia. He regards it as a true horse, and remarks that "if it were possible to prove that culture influenced the growth of the tail, and that this became more hairy, and the mane longer, under altered conditions of life," it might be affirmed that "it was indeed the animal whose ancestors were reclaimed by man in the stone period, the so-called domestic horse of our day.

Preserve the Forest.

The *Monetary Times* says the time has come for paying greater attention to the remains of our forest wealth, be it great or small. Each province has a Crown Lands Department; but the object of these departments has hitherto been rather to sell than to preserve the timber. Great attention is paid to forestry on the continent of Europe, where forest literature has reached extensive dimensions. Our forest literature has yet to be written; and apparently we shall begin seriously to study the subject about the time when we have cut down or burnt up our last forest. The United States is becoming alive to the daily increasing necessity for the preservation of its forest wealth. It is useless to regret the wholesale destruction that has been practised in the past; the one thing needful is to repair it so far as the future needs of the country may require. This work has been commenced in the States; we shall do doubt follow at a greater or less distance.

A Labor Saving Appliance.

Knapp, Stout & Co., with mills at Menominee, Wis., give the following description of the machinery with which the rafted lumber is taken from the water at its yards at St. Louis, Mo.:—We are now operating our pulling machine, and when completed we will be able to handle with it 500,000 feet daily. The track, with six rails, runs out into the river below the low water mark, and back about 200 feet from the shore. On top of the main car, which is 16x44 feet, is another car, 10x32 feet, on which the crib is floated, and then drawn out by machinery and pulled off at right angles from the main track, thus keeping the track into the river, for another top car can be run back to the river for another crib. Our cribs of lumber are 16x32 feet by 50x26 inches deep, and weigh 30 tons. We use a pair of 10x20 inch engines for pulling out the car, and a small engine for transferring. We use a large pump and hose for washing.

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PUBLISHED SEMI-MONTHLY BY

TOKER & Co. PETERBOROUGH.

Terms of Subscription:

One copy, one year, in advance	$2 00
One copy, six months, in advance	1 00

Advertising Rates:

Per line, for one year	$0 90
Per line, for six months	50
Per line, for three months	30
Per line, for first insertion	10
Per line, for each subsequent insertion to 3 mo's.	05
Cards not occupying more than 12 lines (1 inch) per annum	8 00
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All communications, orders and remittances should be addressed and made payable to TOKER & Co., Peterborough, Ont.

Communications intended for insertion in the CANADA LUMBERMAN, must be accompanied by the name of the writer, not necessarily for publication, but as a guarantee of good faith. Communications to insure insertion (if accepted) in the following number, should be in the hands of the publishers a week before the date of the next issue.

PETERBOROUGH, Ont. DEC. 15, 1881.

ATTENTION.

With this issue we complete the first volume of the CANADA LUMBERMAN, as well as the year 1881. In doing so the publishers desire to return their thanks to all who have aided them by their countenance and support since they undertook its management. To render the CANADA LUMBERMAN the success which the publishers desire, and, what is of more consequence, of real benefit to the trade, they are of opinion that two things are absolutely necessary to this end, and these are,—a greater readiness on the part of those engaged in the trade to furnish us with information for publication, and generally a greater promptitude in the payment of subscriptions.

Just now, for instance, we conceive it would be very desirable, and very much in the interest of the trade, if we could place before them a tolerably reliable and full statement of the stocks of lumber, shingles, logs, and square timber in manufacturers' hands from the cut of the season of 1880-1, on the first of January, 1882. Of course in the present instance we would have no similar records for previous years with which to make comparisons, and to draw conclusions from, but it would still be of considerable value, and it would be the beginning of a record which would prove of great value in the future. Under existing circumstances such a statement, however, can only be obtained by each one engaged in the trade undertaking to forward us a brief memorandum of the stocks held by himself, and by his neighbours, where he can do so, from other information than mere guess work, as data from which we might make up district statements. As the labor involved in collating and comparing such returns will be considerable, we would suggest, as a matter of convenience, that the senders should state first the particulars with regard to their own holdings, or those firms in which they are interested, secondly the same particulars with regard to the holdings of others with which they are familiar, and thirdly their general opinion as to the relative stocks on hand now and a year ago, and the probabilities for the season upon which we have entered. If each one would only do this for himself, they would furnish us, and in that way obtain for themselves, an amount of information which could not fail to be of considerable value, without materially trespassing on their holidays. Will they try?

With regard to the second point, by reference to the labels on their papers, they can see just how they stand. For instance, when they find "2 Oct. 81" following their name it requires two dollars to pay their subscription up to the 1st Oct. last, and the same way whenever a figure precedes the month. If they have paid they will find, or should find, the figure "0" before the month on the label. In fact whenever they find a figure before the month on their label, they are indebted to us for that amount, and although the amount, of itself, is small, yet they amount to such a large sum in the aggregate that, if paid, it would send us on our way rejoicing.

In conclusion we beg to take this, the first opportunity we have had, of wishing a constituency extending from Nova Scotia to the Rocky Mountains a Merry Christmas and a Happy New Year, and to express the hope that it is only the first of many occasions upon which we will have the pleasure of doing so.

VALUABLE SUGGESTIONS.

We beg to call the especial attention of our readers to the article headed "Suggestions from Maine," which we have reproduced in this issue from the *Northwestern Lumberman*. It appears that in this neighbouring State they have in a measure solved the problem of perpetuating the supply of lumber from their forests. Our readers may well consider whether we in Canada may not learn something from this example. In some portions of our forest lands some such plan, properly modified, might well be adopted.

THE timber trade out of Hamilton increased considerably this year, and it seemed as if we had indeed returned to the good times of old to see the many cargoes and rafts of timber which left Hamilton during the past season. It is hoped they will still be more numerous next year.

THE timber limits, mill site, and dock at Batchewana Bay, on the North Shore of Lake Superior, which were offered for sale by public auction in Toronto on the 8th inst., failed to find a purchaser. Only one bid of $10,000 was offered, and, this being below the reserve bid, they were withdrawn.

THE Upper Ottawa Towing Company, which has recently been organized for the purpose of navigating the Upper Ottawa and its tributaries, have acquired four of the steamers of the Union Forwarding Company, and intends constructing three new boats which will be ready for the opening of navigation. The fleet will be principally engaged in towing timber and saw logs, but passenger boats will also be put on the route.

A RECENT telegram from St. John, N.B., says there is plenty of snow in the woods on the upper St. John and its branches, and the lumbermen are now fairly at work. The estimated total of the lumber to be cut on the upper St. John this winter is 65,500,000 feet. This, however, does not include the operations on the Aroostook and the Tobique, which will swell the aggregate to not less than 90,000,000 feet. This is about three-fourths of the amount usually obtained.

A GREAT forest of long leaf pines covers more than one-third of the area of Mississippi. This vast forest, taking into view the quality and use of the wood, the inexhaustible supply, the great height and size of the trees, is an enormous store of undeveloped wealth. There is no other such pine forest to be found in the world. As far back as 1753, France supplied her navy with masts and spars from this forest. It is penetrated by numerous water-courses, which are capable of floating the timber to the gulf coast for a distance of about 100 miles. It stands next to coal for fuel in factories and machine shops, and yields turpentine more abundantly than any other species of pine.—*Lumberman's Gazette.*

THE Quebec Timber Company intends to apply to Parliament for an Act of incorporation.

MR. B. YOUNG intends to have 100 men in the lumber woods, Halfway River, and head of River Hebert, during the coming season, in Cumberland County.

THE Bangor, Me., *Commercial* says the finishing up of the season's sawing, the sending of teams to the woods, purchasing of supplies, employing of laborers and preparing the mills, lumber goods and logs for winter, make this the busiest of all busy seasons for our lumbermen. The winter's operations will not be as heavy as last year, owing to the increased cost of labor and the low price of lumber.

Mr. William Mackey, of Ottawa, accompanied by his son and another gentleman paid a visit to Peterboro' last week, for the purpose of ispecting Messrs. Irwin & Boyd's mill, and gathering information about saw mill machinery, as Mr. Mackey is about erecting a new mill on the Ottawa. In the course of the day Mr. Mackey also visited the shops of Mr. William Hamilton, and was so well pleased with what he saw there and we have no doubt but that the visit will lead to business. We may add that this was Mr. Mackey's first visit to Peterborough and that he was induced to make it solely by what he had seen in the *Canada Lumberman* with reference to Messrs. Irwin & Boyd's mill and the manufactures of Mr. Hamilton.

THE *Northwestern Lumberman* says that Bond & Jenkins, some time since, had a quantity of lumber burned on the dock at Oswego, N.Y. The lumber was shipped from Canada, and the duties on it had not been paid. The firm informed Collector Fort, of that port, that they did not wish to pay customs duties on the burned lumber. The collector insisted that the payment must be made, and at length Bond & Jenkins appealed to the treasury department at Washington for a decision in the case. A reply was received from the department that duties on the burned lumber need not be paid; and there was where Bond & Jenkins had the advantage of Mr. Fort. This decision might be considered a test case.

THE *Timber Trades Journal* says that the trade in imported house joinery is assuming large proportions, judging from the steadily increasing supply coming forward both from the Baltic and America. The door trade especially is reported to be brisk, and it is becoming quite a department of the timber merchant's business to keep a stock of these goods. Consumers find it very convenient to buy doors, windows, &c., ready made, thereby saving the trouble and delay of manufacture, although it is questionable whether they could not be made cheaper at home, when heavy railway carriage has to be taken into account. In pine doors we are pleased to hear that Canadian goods appear to be finding great favor, being as a rule well finished off, and thoroughly well seasoned and glued together. The colonials now supply a good door, moulded on the solid, giving all the advantages in appearance and wear possessed by an ordinary moulded door at the same price as a square one of the same dimensions.

OUR FOREST WEALTH.

THE realization by the Ontario Government of over seven hundred thousand dollars, in a single day, for the privilege of cutting timber on the public domain, should of itself, be sufficient to induce the adoption of prompt and vigorous measures for the protecting of our forest wealth. Large however, as is the sum which has been obtained at the sale of the 6th inst., it is after all but a moderate portion of what the Province is likely to receive for the same, and but a very small portion of what it will undoubtedly receive, can the timber now on this twelve hundred odd square miles be protected from its great enemy—fire.

It is true that at the instance of the present commissioner of Crown Lands—Mr. Pardee—the Ontario Legislature some years ago placed on the statute book a measure designed to prevent the setting out of fires during the dangerous seasons of the year, but however good that act may be, it has remained practically a dead letter, owing to its being made the duty of no person or persons to see it enforced, and we believe it will continue so unless the Government appoint proper persons for that purpose. That the importance of the interests involved will justify any reasonable expenditure for such a purpose will not for a moment be disputed.

As matters are now going the day cannot be far distant when the valuable patrimony which we inherited from past ages in our forests will be a thing of the past.

Timber, like that for which we are just now receiving annually large sums, and which directly and indirectly is giving so much employment to our people, is not produced in two or three life times, it is therefore bound to decrease quite rapidly enough under the lumberman's axe, without adding to its depletion by wanton fires, which might be largely prevented by the adoption of proper measures to that end, and by excluding settlers from our pine lands. Of course we are aware that there are those who will cry out against this latter suggestion, but that does not compensate for the millions that have been lost, or prevent the country from being large losers in the way of revenue and employment, by the Government encouraging indiscriminate settlement. The high bonuses already paid and the dues still to be paid for some of the limits sold last week prove, that much of these lands is worth infinitely more to the country for the timber that now stands upon them than the settlers could be, even if a prosperous one could be placed on every hundred acres—a thing which is impossible, because it is notorious that the best pine lands are the least adapted to the wants of the settler—unless he be a timber shark.

Moreover, the encouragement of indiscriminate settlement and a failure to protect the timber from the fire fiend is a great injustice to the men who invest their money in these limits, as well as the Province. High as the prices realized at the recent sale were, they would undoubtedly have been higher, had the purchasers been guaranteed reasonable protection against the destruction of the timber they were purchasing. Indeed the great risk run from this cause every year that it is allowed to stand, compels its owner to cream it as quickly as possible in order to secure himself against loss, notwithstanding that such a course is wasteful of valuable timber, and calculated to depress the lumber market.

It is to be hoped that the importance of the subject will no longer be overlooked by the powers that be, but that speedy and efficient measures will be adopted whereby the most may be made out of our forests, and the evil day when they will cease to yield an income to the Provincial ex-chequer, and afford employment to our people be posponed as long as possible.

GOVERNMENT SALE OF TIMBER LIMITS IN MUSKOKA.

The Legislative Chamber in the old Parliament Buildings on Front street is a quasi-sacred place. When the legislature is in session woe be to the unlucky wight not wearing M.P.P. after his name who ventures therein! He is immediately pounced upon by the sergeant-at-arms and borne away no one knows whither, perhaps to the dungeon or the tomb. But on Tuesday, Dec. 6th, the gloomy old chamber wore a different aspect. If you had dropped in shortly after noon you would have seen the speaker's dias occupied, but not by the speaker, and the member's chairs filled, but not by the members. The occasion was the rarely-occurring one of a sale of timber limits by the Ontario Government, and the occupant of the dias was Mr. G. B. Cowper, of the Crown Lands department,

THE AUCTIONEER FOR THE NONCE,

who wielded an ebony ruler instead of the customary gavel, while filling the chairs and spreading over into the ladies' gallery were leading lumbermen from all parts of Ontario, or those who were acting in their behalf. At the side of Mr. Cowper sat Hon. Mr. Pardee, commissioner of crown lands, in general supervision of the sale. Among

THOSE PRESENT

connected with the lumber trade were Cook

Bros. and McArthur Bros., Toronto; J. R. Booth and R. Nagle, Ottawa; J. C. Miller, Parry Sound; E. W. Rathbun, Deseronto; J. Cockburn, Gravenhurst; J. Petrie, Guelph; T. Murray, Pembroke; J. Bonfield, Eganville, besides several American buyers from Bay City, Saginaw, Tonawanda, and other places. The gentlemen from the other side, however, did not invest to any great extent, the large majority of the berths going to Canadian firms. Besides those engaged in the lumber business were one or two Toronto lawyers, who bought largely in the interests of other parties.

HOW SALES ARE CONDUCTED.

A sale of timber limits is not an everyday affair. The law, with a wholesome fear of what might occur under the stress of "party exigencies," does not permit timber limits to be disposed of in the usual way as lands for settlement purposes. The latter may be bought at any time, but the former can only be obtained when the Crown Lands Department brings on a sale, which must be by public competition. Hence the crowd of lumbermen and others on Tuesday, anxious in the present prosperous state of the lumber trade to obtain limits, and knowing that this would probably be their last chance for years to come. The last sale of timber limits by the Ontario Government was in 1872, when over $500,000 was realized. On Tuesday timber berths in the townships of Mowat, Blair, McConkey, Hardy, Patterson, Mills, Sinclair, Bethune, Proudfoot, Gurd, Machar, Strong, Joly, Laurier, Pringle, Lount, Nipissing and Himsworth, all in the Muskoka and Parry Sound districts, were offered for sale. The limits aggregated

1,411 SQUARE MILES;

berths amounting to 130 square miles were withdrawn, the reserve bid not being reached, and the remainder sold for a total of $717,176, or an average per square mile, exclusive of ground rent, of $560. This is a most remarkable showing, and the significance of the figures will be realized when it is stated that at the last sale, which was held by the Quebec Government, the average was only $98, while the sale held by the Ontario Government in 1872 produced an average of only $199. The bidding on Tuesday afternoon was at the outset slow and backward, the first couple of berths being withdrawn, but it quickly grew rapid and lively, and in some instances very large figures were reached.

THE HIGHEST PRICE PAID

was for berth No. 2 in the township of McConkey, which was knocked down to Mr. J. M. Martin for $2,500 per square mile, or a total of $40,000; berth No. 1 in the township of Joly was sold to Mr. J. L. Burton for $42,550, or $2,300 per square mile; No. 4 in Nipissing to C. A. Brough for $28,875, or $1,540 per square mile; No. 3 in Mills to the same gentleman for $25,381, or $1,410 per square mile; No. 3 in Joly to J. Bonfield for $21,900, or $1,200 per square mile; No. 4 in Strong to McArthur Bros. for $11,000, or $1,100 per square mile; No. 3 in Himsworth to J. R. Booth for $17,760, or $1,110 per square mile; No. 3 in Sinclair and No. 1 in McConkey to Cook Bros. for $14,840 and $22,847, or $1,060 and $1,050 respectively per square mile. The lowest price reached was for No. 3 in Mowat, which was sold to T. G. Blackstock for $937, or $50 per square mile. The sale altogether was

A MOST SUCCESSFUL ONE,

fully realizing in the matter of prices the expectations of the Government. As the law formerly stood, limit holders had only five years in which to remove the pine from the lands which they had under license, any timber remaining after that time belonging to the settler, but at the last session of the legislature an Act was passed under which a licensee on payment of the ground rent ($2 per square mile) and dues may renew his license from year to year, the Government after a certain number of years paying to the settler a percentage of the dues collected upon the timber cut. The disparity between the prices paid for different berths is of course accounted for by the variety in the quality and quantity of pine, the facilities for floating down streams, acreage burnt, etc.

NO INFORMATION

respecting the quantity of pine on the various berths etc., was furnished by the Government, and intending purchasers had to make an examination for themselves of such limits as they wished to buy. As one facetious lumberman put it when the sale was drawing to a close and the auctioneer remarked on the growing darkness of the room, "We've been in the dark all the afternoon." Lumbermen, however, generally know what they are doing and buying, and those at the sale on Tuesday did not look as if they were exceptions to the rule. As a matter of fact all the firms sent out experts to examine the several berths, and of course the reports made thereon were kept a profound secret. As soon, however, as the berth was knocked down the lumbermen would tell one another what their report was. For instance, one berth over which there was considerable competition was reported to one firm as being good for three-quarters of a million feet per mile, and another firm had it rated at one million. One gentleman, however, nearly caught himself in the matter of a bid. One limit which was going up by $10 bids, and had reached the sum of $2,090, when the audience was suddenly surprised to hear him ejaculate "$3,000." This, of course, put a stop to all further competition, and the berth was knocked down to him for that sum. It turned out, however, that the too eager buyer had only intended to advance the usual $10 and say "$2,100." The limit was accordingly put up again and ultimately sold to another for $2,300.—*Toronto World.*

THE frame work of the knitting factory on Goderich street, Halifax, is fast approaching completion. The manufactory will give work to some forty or fifty hands.

M. LEGRU, the Paris capitalist, now in Quebec, says that fifty millions of francs have been subscribed in France for investment in local industries in Quebec Province.

ONE EXPERIENCE FROM MANY.—I had been sick and miserable so long and had caused my husband so much trouble and expense, no one seemed to know what ailed me, that I was completely disheartened and discouraged. In this frame of mind I got a bottle of Hop Bitters and used them unknown to my family. I soon began to improve and gained so fast that my husband and family thought it strange and unnatural, but when I told them what had helped me they said "Harrah for Hop Bitters! long may they prosper, for they have made mother well and us happy."—The Mother. — *Home Journal.*

A RELIABLE FACT.—It is an established fact that Hagyard's Pectoral Balsam is the best cure for coughs, colds, sore throat, asthma, croup, bronchitis, and all troubles arising from neglected colds. Price 25 cents.

DECLINE OF MAN.—Impotency of mind, limb or vital function, nervous weakness, sexual debility, and all diseases caused by indiscretions and abuse, are radically and promptly cured by the use of Mack's Magnetic Medicine, which is for sale by all responsible druggists. See advertisement in another column.

WEAK LUNGS AND HOW TO MAKE THEM STRONG.—Breathe with the mouth closed, have access at all times to pure air, exercise moderately, eat nourishing but sample food, and take that best of all cough remedies, Hagyard's Pectoral Balsam, it speedily cures all throat and lung troubles of adults or children. Price 25 cents per bottle.

WHEN DOCTORS DISAGREE, WHO SHALL DECIDE?—Nothing is more variable than the different opinions of medical men; but when they fail to agree, or perform a cure in a chronic disease, the patients often decide for themselves, and take Burdock Blood Bitters, and speedily recover. It is the grand key to health that unlocks all the secretions, and liberates the slave from the captivity of disease.

HAGYARD'S YELLOW OIL will be found invaluable for all purposes of a family medicine. Immediate relief will follow its use. It relieves pain, cures chilblains, frost bites, scalds, burns, corns, rheumatism, neuralgia, etc. For internal use it is none the less wonderful. One or two doses frequently cure sore throat. It will cure croup in a few minutes. A few bottles has often cured asthma. Colic has been cured by a a teaspoonful dose. It cures with the utmost rapidity, It is really a wonderful medicine.

NO IMPOSSIBILITY.—People often say, when suffering in the first stages of Consumption, or suffering from lung disease, if their physician fails to effect a cure, "my case is a hopeless one, and my enjoyment of health again is an impossibility." The celebrated French Count Mirabeau's nasty temper is well known. "Monsieur le Comte" said his secretary to him one day, "the thing you require is impossible." "Impossible" exclaimed Mirabeau, starting from his chair, "never again use that foolish word in my presence." It is well-known that N. H. Downs' Vegetable Balsamic Elixir has brought to health and strength thousands who were told by doctors that their recovery was impossible. Be not deceived by any apparent impossibilities; always use the Elixir.

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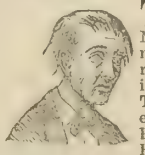

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and a thousand other diseases that owe their origin to a disordered state of the Stomach and Bowels, and inaction of the Digestive Organs, when the use of

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will give immediate relief, and in a short time effect a permanent cure. After constipation follows **Biliousness, Dyspepsia, Indigestion, Diseases of the Kidneys, Torpid Liver, Rheumatism, Dizziness, Sick Headache, Loss of Appetite, Jaundice, Apoplexy, Palpitations, Eruptions and Skin Diseases, etc.,** all of which these Bitters will speedily cure by removing the cause. Keep the *Stomach, Bowels, and Digestive Organs in good working order and* **perfect health** will be the result. **Ladies** and others subject to **SICK HEADACHE** will find relief and permanent cure by the use of these Bitters. Being **tonic and mildly purgative** they **PURIFY THE BLOOD** by expelling all Morbid Secretions.

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SUGGESTIONS FROM MAINE.

It was given out fifteen or twenty years ago that the lumber producing capacity of the state of Maine was nearly exhausted, and the time was fixed, by those learned in forest lore, when the last mill would be shut down, the occupation of the Maine lumberman would be gone, and the prestige of that political division of the republic known as the Pine Tree State would linger over it only as a memory. In truth a part of this prophecy has come to pass, for a large proportion of the pine of Maine has been exhausted, and spruce is now the great dependence of the manufacturers. Yet a good deal of pine is still cut in that state, and the supply is likely to be prolonged by a system of economy that is the genius of eastern industry, and is but little appreciated or practised in the West. This economy is habitual in all lumbering operations in Maine, and pertains to the cutting of spruce, hemlock, and other timbers, as well as to pine. Its peculiarity is that the largest timber is cut first, while the smaller is lett, and carefully preserved to grow for a future supply. In this way the timber lands of Maine have been repeatedly cut over, to a large extent, at least. Yet a stranger passing through these same forests would scarcely recognize the fact that they had supplied the eastern cities for years with millions of feet of lumber, for the growth of trees still thickly covers the land. It is only by observing the stumps that are here and there scattered amidst the standing timber that one would begin to realize that these silent and sombre woods once echoed with the ringing sound of the axe, the crash of falling trees, and the shouts of loud-voiced teamsters. So well have the economy of man and the forces of nature done their work, that the forests of Maine still maintain their primeval appearance, and promise to supply the sturdy woodsman with employment for an indefinite period to come. As a leading land owner recently put it to the writer, with a latitude of faith, "With the present system continuously practised, the timber supply in Maine will last to all eternity."

The advantages derived from this system of forest preservation are worthy of consideration in localities where a more careless method is pursued. One advantage is that timber becomes a source of repeated revenue, as crop after crop is taken from it. First the larger growth of pine is assorted out; then the larger growth of spruce, perhaps; then the hemlock can be cut. In a few years this process can be repeated, the growth of the timber constantly creating a supply of larger trees. This development of supply is peculiarly conserved and stimulated by itself. In other words, none of the land being wholly denuded of forest, the humidity and wealth of the soil is preserved, and fires do not sweep over the country, as in Michigan and Wisconsin, destroying the timber, root, trunk and branch. It is indeed stated that a devastating fire is impossible in the state of Maine, and certain it is that we have no knowledge of such wide-sweeping conflagrations as have devoured the forest wealth of Canada, Michigan and Wisconsin. Here is a practical example of that kind of forest preservation that the advocates of forestry laws would see generally adopted and enforced.

In Maine the individuals directly associated with the lumber and timber interests are grouped in three classes:—The owners of the lands; the operators, or those who get out and sell the logs, and the manufacturers. Of course these classes often intermingle their interests. The land owners, however, form the most distinct class, and are the autocrats of the situation, as the landlords usually are. They are men of capital, and are a long-headed community. They are the possessors of the foundation of the lumber interest, and are content to bide their time. They value their lands for the timber they will produce, and intend to make the most of it, as the system which they pursue, already indicated, abundantly shows. They found out, years since, that the farmer does not seek a settlement on their timber tracts, but prefers, instead, to emigrate to the West. The soil, though rich, is not abundant, a large portion of the surface being occupied by rocks. It is thought too, and probably with truth, that the prohibition legislation of Maine has acted as a deterrent to many foreign emigrants who would otherwise settle in the state. Certain it is that the hardy Scandinavians or Germans could make themselves comfortable homes in the Pine Tree State as quickly as anywhere else, and secure the benefits of nearness to profitable markets, as well as greater nearness to the Fatherland. A heavy land owner of Bangor, who was himself a temperance man, and not opposed to anti-liquor legislation, admitted to the writer that he had no doubt but that the "Maine law" had prevented many foreigners from settling in that state. He even said that, under the circumstances, he never expected to see the forest lands of Maine cleared and settled, for this prejudice against the sumptuary law of the state had got abroad, and it would be nearly impossible to destroy it; and the rugged lands of Maine must be settled by foreigners if at all. No doubt this fact of the unmarketableness of the wild lands of Maine has prompted the owners of it to make the most possible of its timber resources.

The general practice is for the owners of the land to sell permits to the operators to lumber on their property. It is usually owned by townships, and the boundary lines of these local divisions mark the disposal of limits. The choice of townships, both as to ownership and the granting of permits, is of course determined by their nearness to streams or lakes suitable for getting logs to the mills. The Maine lumberman is quite particular about this, and looks with disfavor upon lands that a Michigan or Wisconsin operator would think quite accessible—by means of a logging railroad if by no other. Some of the remoter sections in the northern part of Maine are regarded as of little value by both owners and operators, and they do not even make an effort to stretch their imaginations to the time when the demand for lumber and the building of railroads will make these far away districts available. It would seem that here the "Downeaster" is less sagacious than his Western compeer; for the latter is already ranging the mountains of Montana for timber prospects, or hunting pine half way from Lake Superior to Hudson Bay.

In selling permits to operators to cut timber it would seem at first blush as if they conferred upon the purchaser an unlimited privilege to cut and slash according to his own free will, to the most reckless destruction of timber, a result directly opposed to the preserving policy that has been heretofore indicated. But here profit steps in as a conservative element. The operators, in order to realize as much as possible on an operation, must cut all the largest timber, discarding the smaller growth. Though the permit grants them the privilege of cutting as much as they wish within certain specified boundaries, it does not require them to cut more than they desire; in fact, there is no amount stipulated. Economy, then, dictates that the operation shall be a profitable one, and to secure this result the larger trees only are selected, while the smaller ones are left to grow. This system causes a constant competition to secure eligible locations for logging, and deters men from going back into the remoter districts, as they would be more apt to do than if the operators owned the land. Spruce stumpage near streams, or where two logging streams join, sells at $4 and $4.50 per thousand, while that which is farther away from the water will bring but $2.50, more or less.

The mill men of Maine have got into the habit of competing with each other so sharply in the purchase of their log stock that they have narrowed the margins of their business down to a mere thread of selvage; and this mainly depends on the ups and downs of freight rates. This limited margin is said to be a folly on the part of the manufacturers; for if they would combine together for a regulation of prices they could secure them as well as not. Probably the mill men themselves would tell a different story. It is said that often, late in the season, when freight rates become so high as to sweep away all their margins, the manufacturers let their cargoes go to sea without insurance, alleging as an excuse that the margins were all gone anyway, and if the lumber goes to the bottom, or up in smoke, they will have saved their insurance money in either event; a not very consolatory reflection, in fact, after the cost of production has been annihilated, which might have been saved by insurance.

The hemlock of Maine is one of the principal sources of timber wealth in that state. There is a belt of this kind of timber, forty miles in width, and running entirely across the state, from New Brunswick to New Hampshire. The principal profit from hemlock is derived from the bark, which is worth at the tanneries $6.50 a cord. The heaviest of these latter are situated along the European & North American railway, which, in the eastern part of the state, traverses the hemlock belt. They are located with especial reference to the bark supply, and will exist as long, and no longer, as that supply lasts. Since the building of the European & North American Railway, and the rising of the tanning industry along the line, there has been a great scramble for hemlock lands, the leather companies securing all that was possible. At first it was thought that hemlock was only valuable for its bark, but the constantly increasing consumption of lumber has given value to hemlock timber, also, though it is not enormous. For several years after the bark industry arose, the stumpage of hemlock sold for $1.25, the bark being worth $1, while twenty-five cents was skimped out of the log. Latterly that figure has been considerably raised, and the prospect is that the value of hemlock will continue to increase.

Of late years a special feature of the lumber industry has sprung up in Maine, which consists of sawing second growth timber into box boards. This manufacture is mostly carried on in the winter season, by small mills, when the large ones are shut down. The demand for box boards is very brisk from the manufacturing towns in Massachusetts, Rhode Island and Connecticut, and the narrow stuff which is sawed out of small, second growth timber, is sufficient for the purpose, and at the same time can be afforded at a reasonable figure. This special demand has stimulated a special effort to supply it, and the sawing of box boards has become quite distinct from the general lumber manufacture. The logs are sawed up without being squared or slabbed, and the lumber brings in Boston from $14 to $16 per thousand.—*Northwestern Lumberman.*

A LUMBERMAN'S LIFE.

The Philadelphia *Times* says:—The post of danger in the duties of a lumberman is on the jams, and there the most skilful men are sent. Pitfalls will open in the midst of a solid mass of timber, and then close in a moment, after having dragged a man down beyond all help; a log will move a few inches slowly and unnoticed, and then with a movement like an arrow strike a man, crushing the life out of him in an instant. On every side dangers are lurking, and he is fortunate that passes a spring without injury. There is something attractive in the looks of a log jam, and if the fascination that danger has were taken from it, still he would rather work there than on the shore. The long, narrow sea of white timber, cracking and writhing with the current, the water roaring and foaming as it escapes from its prison under the logs, and the logs themselves moulded into fantastic shapes by the terrible pressure behind them, all have an attraction for men who are impressed by strength or picturesqueness.

Floods are made by large floating dams, and will raise the water several feet, lifting the jam up into the air as if it were a toy boat. If a specially large flood is needed, two and sometimes three are used at a time, the flood gates of the lower dam being opened just as the water from the dam above reaches it. In this way an immense "splash" is obtained that only the most refractory jams can successfully combat.

There are few grander sights to be seen anywhere than the moving of a large log jam. The grand strength with which they move, tearing out the largest trees and forcing everything before them, and the fierce motion of the logs, like the crazy shuttles of some giant machine, and the perfection of force compel enthusiasm from the most phlegmatic spectator. The wild hurrahs of the men on the logs add to the excitement, and the observer is quite sure to find himself running along by the side of the moving mass cheering as if he had won a battle. The men who are at work scarcely realize the danger, they are so carried away by the excitement, and they may be seen jumping from one log to another and cheering as though perfectly safe on solid ground, instead of a dangerous sea of moving logs that are continually rising and falling and dodging this way and that, driven by the flood of water furnished by the floating dams. The skill shown by experienced floaters in riding logs is wonderful, and it seems impossible for human dexterity to reach such perfection. A jam will sometimes form where precipitous rocks make it impossible for the men to escape on either side, and they must ride the logs for several rods. In such places the water is always swift, sometimes forming rapids, and watching the logs tumbling, jumping and rolling along with a deafening roar, one wonders how men can live among them for an instant. Behind the jam breakers come the sackers with their teams, drawing the logs that jams have forced far out on the banks and rolling in those on the shore. "Bringing up the rear," is the technical term given this work by the lumbermen, and it is no more desirable than occupying the same position in the army. It is terribly cold work too, wading in the snow water, ice freezing on the levers and on the clothing wherever exposed to the air, and makes the spectators shiver to watch them. But the hardy lumbermen do not mind it. They expect it, and their strength is equal to the demand.

At mealtime they all come with prodigious appetites for their rations, that are as hot as can be eaten. Hot biscuits, potatoes, eggs, meat, tea, coffee and everything else, solid and liquid, are smoking like the steam from a locomotive, while generous draughts from the cup that inebriates add their fuel to the general fire. No cold victuals are current in log-floating time, all the chill required is found in the ice water, and something has to be taken to counteract its influences.

The nights are spent in camps, where the roaring fires burn all night, partially to dry the wet clothes that must be put on in the morning. Coming into the room where the clothes are hung, a great cloud of steam is seen that rises to the ceiling, where it condenses, and either falls down in drops or evaporates on the warm boards, and the clothes are all smoking as if engaged in a contest. When the river is reached the life changes. There are few jams to break, less wading, and more riding in boats, and all the work is easier and less dangerous. If the logs stop on a rock that is out in the middle of a river, a boatman carries some men there who may roll them off and get into the boat again without danger and without getting wet. There are logs along the shore to be rolled in, but the water is not as swift as in the runs, and in the deep water a man can stand with comparative safety. Everything is easier, and the day the river is reached is almost a holiday among the lumbermen.

Talk About Timber.

The Kingston *Whig* says a gentleman, whose knowledge of the timber trade is well known, stated that the timber trade this year had been better than it had been for some years. He did not think that unchartered vessels lost anything, as they secured fully as high rates as those that had been engaged last winter. The freights paid fairly well, but nothing more than vessels ought to earn; in fact if the profits were less no person could afford to build vessels or keep them in repair. This winter, he thought, it would be difficult to obtain charters, as the owners of timber were likely to hold off until the spring. This was owing to the fact that last summer rates fell to lower figures than those for which vessels had been chartered. He thought this holding off would be a wrong policy, as when there was a demand for vessels the captains would be more independent. There will really be a larger amount of timber for moving next year than this. The method of chartering will be the very opposite to that which was adopted last winter. If there be good rates for grain, vessels will prefer to carry it. Grain freights this year were, however, far below the average, and not nearly so good as the year before. A 6c. freight from Toledo and a return cargo of iron ore to Ashtabula or Cleveland would be better than a $70 freight on timber from the same port.

Chips.

THE number of rafts that have passed through the draw of the bridge over the Mississippi, at Davenport, Iowa, the present season is 947.

A POPLAR tree in Etowah county, Alabama, measured twenty-five feet in circumference. One in Barren county, Ky., measured thirty-three feet.

MAJOR A. B. WATSON. of Grand Rapids, has recently bought pine lands in Louisiana which is estimated to cut 350,000,000 feet. He has unloaded all his pine lands in Michigan, the *Eagle* says.

THERE are 150,000,000 feet of logs in a solid jam above Croton piers, Muskegon River, Newaygo county, Mich. The drive is hung up for the season. It is thought that the logs below the Newaygo will last the mills at Muskegon till they are shut down.

THE Privy Council has just given a decision sustaining the "Act respecting uniform conditions in policies of fire insurance," passed by the Ontario Legislature as constitutional, and declaring that it does not interfere with the matter of "trade and commerce," as allotted to the Dominion Legislature.

THE black walnut timber of Arkansas will prove a mine of wealth. In fact there is not a more profitable crop that can be raised on southern soil than black walnut, and it is not wide of the mark to say that the growing of this valuable timber will be one of the greatest industries on the southwestern prairies at no distant day.

THE cold weather has compelled the Chaudiere mills to close down for the season. The cut this year, though not as large as anticipated, was an extensive one. The demand throughout the season for sawn lumber has been good, and prices have not been as high since 1872. Comparatively speaking very little stock will be wintered here.

IT is said that operations will shortly be commenced with a view to rendering the Lievere River navigable between Buckingham and High Falls, to the great advantage of the lumbermen and phosphate miners in that district. This is a much better way of spending the surplus than in making paltry reductions which nobody would feel.

A LARGE pine tree on the site of old Fort Herkimer, New York, which had escaped the axe of the woodman because it had given shelter to General Washington and party, while dining beneath its boughs, when on his way to visit Fort Stanwix, was blow down in a gale a short time since. It was over four feet in diameter at the butt and over one hundred and fifty feet in height.

IN a report on the forests of British Columbia, Prof. Dawson, of the Geological Survey of Canada, dwells upon the importance of the timber trade of the Dominion. The Douglas fir, or Oregon pine, is the most valuable tree he refers to. It is often more than eight feet in diameter, and from 200 to 300 feet high, forming dense forests, The Western hemlock and red cedar are next in importance, and grow to a great size.

THE *Nashville American* learns from a responsible lumberman that there is now on hand in that city 30,000,000 feet of sawed lumber, which could be delivered in a day, if that were necessary. Besides this amount, Nashville lumber dealers own 10,000,000 feet of lumber on the river and along the various railroads leading into the city, making a grand total of 40,000,000 feet of lumber now in the market. A large number of agents from the northwest are now in Tennessee seeking timbered lands.

THE *Lumberman's Gazette* says that the magnitude of the cedar business in Alpena county may be somewhat imagined by the fact that during the present season Bolton & McRae, who are the largest dealers in that kind of timber, have shipped 350,000 railroad ties, and 250,000 fence posts; and besides the above, there has been shipped large quantities of ties and posts by Bewick, Comstock & Co., Johnrowe & Donnelly, Morse & Dewey, Folkerts & McFhee, and others, the sum total of which would no doubt reach 600,000 ties and 500,000 posts.

THE EXPORT LUMBER TRADE.

The Montreal *Gazette* says the shipments of deals from that port to the United Kingdom during the season of 1881 just closed consisted of 38 cargoes, containing 21,838,287 feet, against 19,781,885 feet in 1880, showing an increase of 2,056,402 feet. The shipments of deals from from Pierreville during the past season were five cargoes, aggregating 2,697,562 feet. The total shipments of deals and lumber from Montrea to South America and the United Kingdom for the past season amount to 34,704,228 feet, against 28,250,919 feet for the season of 1880 which shows an increase of 6,453,309 feet. The following is a detailed statement of deal shipments from Montreal and Pierreville to the United Kingdom and the Continent for 1881, as furnished by Messrs. Anderson, McKenzie, & Co. :—

FROM MONTREAL.

Name of Vessel.	*No. feet.*
Thule	626,764
Carla	426,391
Haab	739,924
Lord Palmerston	514,085
Mallard	518,952
Alida	282,612
Lindola	314,967
St. Kilda	870,732
Lake Simcoe	211,860
Statsminster Stang	270,930
Falde	381,892
Adele	273,595
Arnim	240,432
Aeger	378,730
Memlo	836,715
Lake Nepigon	65,000
Port Royal	227,727
Prince Llewelyn	242,027
Elizabeth Mary	235,042
Hilda	663,300
Amal	394,671
Beaconsfield	595,580
Xenia	572,220
Texas	277,100
Mississippi	198,741
Texas	140,561
Fido	155,127
Dronning Louise	427,130
Montreal	39,600
Virgo	426,360
Glendonwyn	140,580
Wayfarer	601,920
Roycroft	518,760
Ocean King	196,020
Laura Emily	607,860
Garden Island	762,300
Nebo	536,580
Dampier	326,700
Total	21,838,287

FROM PIERREVILLE.

General Birch	745,415
Indiana	476,255
Framines	638,495
Cap	520,167
Mary A. Wilson	318,230
Total	2,697,562

The total shipments of deals and lumber from Montreal were as follows in the years :—

	1881.	*1880.*
To U. K. and Continent	21,838,287	19,784,885
To South America	12,865,941	8,566,034
Total	34,704,228	28,250,919

FEEBLE LADIES.—Those languid, tiresome sensations, causing you to be scarcely able to be on your feet; that constant drain that is taking from your system all its elasticity; driving the bloom from your cheeks; that continual strain upon your vital forces, rendering you irritable and fretful, can easily be removed by the use of that marvelous remedy, Hop Bitters. Irregularities and obstructions of your system are relieved at once, while the special cause of periodical pain is permanently removed. Will you heed this?—*Cincinnati Saturday Night*

THE SADDEST OF SAD SIGHTS—the grey hairs of age being brought with sorrow to the grave is now, we are glad to think, becoming rarer every year as the use of Cingalese Hair Restorer becomes more general. By its use the scanty locks of age once more resume their former color, and the hair becomes thick and luxuriant as ever; with its aid we can now defy the change of years, resting assured that no Grey Hair at any rate will come to sadden us. 50 cents per bottle.

HONESTY.—It is commonly said that you cannot make an honest man believe that white is black and *vice versa*, but those who have grey hair by using the "CINGALESE HAIR RENEWER," will find that this apparent difficulty is easily overcome. 50 cents per bottle.

HAGYARD'S YELLOW OIL is at the head of the list for all purposes of a family medicine. It is used with unprecedented success, both internally and externally. It cures sore throat, burns, scalds, frost bites; relieves, and often cures asthma.

Petitions to Parliament should be written in a bold, round, open hand, for which purpose Esterbrook's blunt and broad pointed pens are the best. Address the Esterbrook Steel Pen Co., 26 John St, New York, for samples.

RESPECT.—The Grey Hairs of old age demand and should receive respect—but the Grey Hairs of young people require attention—in the way of using Cingalese Hair Renewer. 50 cents per bottle.

D. S. BRIGGS,
9 TORONTO STREET, TORONTO.
WHOLESALE DEALER IN
Clear, Pickings, Common and Hardwood Lumber, Lath, Shingles, &c.
BILL STUFF CUT TO ORDER.
L12-1y

J. K. POST & CO.
LUMBER MERCHANTS
And Shipping Agents.
OSWEGO, N. Y.
L12-1y

J. & F. N. TENNANT
Dealers in all kinds of
Lumber, Lath & Shingles,
Office, Union Loan Building,
Toronto Street, Toronto.
L2426

S. S. MUTTON & Co.,
Wholesale Lumber Dealers
TORONTO.
We have for Sale a large quantity of PINE, OAK, WHITEWOOD, ASH, CHESTNUT, CHERRY, BUTTERNUT, BASSWOOD, &c.
☞P.S.—A SET OF TUB MACHINERY FOR SALE, CHEAP—OR EXCHANGE FOR LUMBER. 1yL16

A. L. UNDERWOOD
WHOLESALE DEALER IN
White Pine, Basswood & Hardwood,
82 King Street East,
TORONTO, ONT.
1yL16

UNION FOUNDRY
Union Street, - - - Carleton,
Warerooms, Water Street,
ST. JOHN, N. B.

Allan Brothers
(Late of Harris & Allen)
MANUFACTURERS OF ALL KINDS OF
Steam Engines
AND
MILL MACHINERY.
Ships Windlasses, Iron Capstans
and Ships CASTINGS of all kinds.
Ships Cambooses & Cabin Stoves
COOKING AND HEATING
STOVES,
Shop, Office and Parlor Stoves, and Franklins.
Agricultural Implements.
BRASS CASTINGS.
Tin, Sheet Iron and Copper Ware for SHIP and HOUSE use.
L22-1y

PORTLAND FOUNDRY.
JOSEPH McAFEE,
(LATE ANGUS McAFEE.)
Warehouse, Main St., St. John, N.B.
AGRICULTURAL IMPLEMENTS.
MANUFACTURER OF
Cooking, Ship, Parlor & Office Stoves
MILL CASTINGS
Ship Windlasses, Capstans, and Ship Castings of all kinds,
(MADE TO ORDER.)
Power Capstans, Patent Ship Pumps
1y With Copper Chambers. L20
Lead Scuppers & Water Closets & all goods in my line for Ships' use.
Work done to Order with Quick Despatch.

IRWIN & BOYD
Commission
Lumber Dealers,
FORWARDERS,
Shipping & General Agents
PORT HOPE.

KERR BROS.
PRACTICAL
Founders, Machinists,
And Millwrights.
Manufacturers of Marine and Horizontal and Portable
Engines, Boilers
Grain Elevators & Steam Hoists,
Saw and Flour Mill Machinery.
With Latest Improvements A SPECIALTY
The ABEL EDWARDS CENTENNIAL TURBINE WATER WHEEL.
RODEBAUGH'S SAW FRAME, MILL DOGS and SAW GUIDES.
WATER WORKS, THE LATEST AND MOST IMPROVED, MADE TO ORDER.
LIGHT and HEAVY BRASS and IRON CASTINGS.
☞Plans and Specifications on application.☜
The Walkerville Foundry
AND
MACHINE WORKS.
Walkerville, Ont., June 1881.

Market Reports.

MONTREAL.

From Our Own Correspondent.

DEC. 8th.—As usual at this season of the year the lumber trade has been very quiet, and confined to a small local demand. After the New Year, Americans generally come over to try and pick up some car lots, after which we hope to have a little more to say. Stocks of clear lumber in the city are small, but of the common kinds there is abundance to meet all the requirements. People in the trade are keeping down their stocks as much as possible till after stock taking. They prefer doing this and taking the chance of getting car lots as they are required. The extra winter freights by rail, which amount to about forty per cent. on the North Shore Railway, have prevented some pretty large contracts from being made. Prices generally are firm, but as yet we cannot make any change on our late list, which we again repeat :—

Pine, 1st quality, ₱ M	$32 00@40 00
Pine, 2nd " ₱ M	18 00@24 00
Pine, shipping culls, ₱ M	12 00@15 00
Pine, cull deals, ₱ M	8 00@10 00
Pine, mill culls, ₱ M	5 00@ 6 50
Spruce, ₱ M	8 00@10 00
Hemlock, ₱ M	8 00@10 00
Ash, run of long culls out, ₱ M	16 00@18 00
Bass, " " ₱ M	14 00@16 00
Oak, ₱ M	35 00@45 00
Birch, ₱ M	17 00@20 00
Hard Maple, ₱ M	18 00@25 00
Lath, ₱ M	1 25@ 1 35
Shingles, 1st, ₱ M	3 00@ 0 00
Shingles, 2nd, ₱ M	2 00@ 0 00

CORDWOOD.—The market is firm and likely to remain so, as stocks, both of coal and wood, are less this year than usual, and dealers seem confident of higher prices soon, unless the North Shore Railway brings in a very extra supply. All wood has been removed from the wharves, and supplies are now drawn from the railway depot. The weather has been so mild of late that the demand has been very quiet, but tonight the thermometer is nearly at zero, and there is every appearance of a cold spell, so that more activity is looked for from this out. Our quotations are now from the railway depot, ex cartage :—

Long Maple	$6 50
Short "	6 00
Long Birch	6 00
Short "	5 50
Long Beech	5 50
Short "	5 00
Long Tamarack	4 50
Short "	4 40

TORONTO.

From Our Own Correspondent.

DEC. 8th.—The last cargo of lumber for American markets, for the present season, has left this place, and lumber matters have assumed a quiet aspect. A considerable quantity is still coming forward for the local market, and shippers can now obtain all the cars they require ; but the trouble now is that there is not the lumber on hand at the mills to keep up the present supply for any considerable length of time, and the fine open weather of the past few weeks has enabled building operations to be prosecuted with as much vigor as at any time during the season. The clang of the bricklayer's trowel is still heard on every hand, and there is but little diminution in the number of buildings being erected observable. In the early part of December of last year teams were drawing lumber over our Bay upon the ice, and all building operations were at a complete standstill, whereas all the yards now seem to have all the trade they can do, and more yards are rising into existence. A new firm has just opened up on the western confines of the city, immediately adjoining the municipality of Brockton. Their shingle reads, "Baumhard & Marshall, Builders and Lumber Dealers," and their reputation as business men stands well.

Then the well known firm of John Oliver & Co. has leased the large yard formerly kept by J. R. Sillerman. Their intention is to stock this yard with pine, and also use it as a warehousing premises, so that any who wish to avail themselves of the privilege of doing so, can have their lumber piled off the cars and obtain a warehouse receipt for the same. These premises are especially adapted for this purpose, as cars from nearly all the railways can be run into the yard and unloaded promptly. This will be a boon to many persons who bring lumber to this market for sale, and in many cases incur demurrage for detention of the cars before they have been able to dispose of their lumber.

The supply of dimension stuff for this market is still extremely meagre, what little there is being fresh from the saw, and so few mills now being in operation, bills of any considerable quantity cannot be furnished at all promptly. The demand for shingles at present is quite limited, as a large number of the buildings now being erected have flat roofs, covered with felt and gravel, and the better class of houses are slated. Lath is scarce and will likely continue so for some time to come. The only kind of lumber that is at all like a drug on the market is the coarse grades of boards, but should the winter continue to be a mild one, there will not be any overstock of this or any other kind of lumber.

At this period of the year 1880 mill men had a large portion of their logs banked, and should they get favorable weather for logging purposes immediately, the season must necessarily be a short one ; so that the outlook for good prices for any lumber that may be placed on the market next year is a good one, and I think that when the retailer comes to foot up his profit and loss sheet for the present season, he will find it on the whole satisfactory, as the number of bad debts made in prosperous seasons like the present is not near so large as in years of depression.

QUOTATIONS.

Mill cull boards and scantling	$8 9 00
Shipping cull boards, promiscuous widths	11 00
" stocks	13 00
Scantling and joist, up to 16 ft	12 00
" " " 18 ft	13 00
" " " 20 ft	13 50
" " " 22 ft	14 00
" " " 24 ft	14 50
" " " 26 ft	15 50
Scantling and joist, up to 28 ft	16 00
" " " 30 ft	18 00
" " " 32 ft	19 00
" " " 34 ft	20 00
" " " 36 ft	23 00
" " " 38 ft	25 00
" " " 40 to 44 ft	30 00
Cutting up planks to dry	18 00
" boards "	16 00
Sound dressing stocks	15 00
Picks Am. inspection	26 00
Three uppers, Am. inspection	34 00
B. M.	
1½-inch flooring, dressed	28 00
1½ " " rough	14 00
1½ " " dressed	24 00
1½ " " undressed	14 00
1 " " dressed	20 00
1 " " undressed	15 00
⅜ Beaded Sheeting, dressed	20 00
Clapboarding, dressed	12 50
XXX sawn shingles, ₱ M	2 80
XX sawn shingles	2 75
Sawn Lath	1 75

OTTAWA.

From Our Own Correspondent.

Lumber yards in this vicinity, and especially at the Chaudiere, are daily being depleted on a small but noticeable scale, for, notwithstanding that navigation is closed, large quantities of lumber, for the fulfillment of contracts entered into early in the season, are being forwarded by rail to the States, the objective point principally being Boston. Shipping facilities are steadily increasing, consequently proving a great boon to the lumberman, affording them a better means of

EXPORTING THEIR PRODUCTS.

A few days ago the St. Lawrence & Ottawa Railway made connection with the Interprovincial Railway bridge at the Chaudiere. This will prove of great value to the general trade, and especially for the shipment of lumber. The proposed through route from Montreal to Chicago, touching at this point, is also another desirable move. The connections will be made shortly, negotiations for which are at present proceeding. The exact cut in this vicinity can as yet be but partially ascertained, but sufficient figures can be gathered to give

AN APPROXIMATE IDEA.

Stock taking is now progressing in many yards, and until the work is completed the total result cannot be known. So far as learned the total cut will be about 225,000,000 feet, considerably less than the cut for the previous season. The difference is accounted for by the scarcity of logs. If circumstances had proved anyway more favorable, there is no doubt but that operations would be carried on to

THEIR FULLEST EXTENT,

as mostly all that can be cut finds ready sale, orders being numerous and rates good. The exports of lumber from this port to the United States from January 1st to November 30th amounted to $2,069,159, being $87,602 more than during the same period last year. The quantity shipped was considerably less than last year, but the increase in value is due to the advanced rates obtained. Demand for shanty hands still keeps good, while the supply is nothing like what is desired.

WAGES

remain about the same, and an increase cannot well be expected, as all the concerns are now pretty well supplied. Operations on the limits this winter are being carried on as extensively as in past seasons, if not more so ; and it is expected that all next season will be,—in the history of lumbering operations in the Ottawa Valley,—a repetition of the great boom of 1869-70.

THE ELECTRIC LIGHT

is gradually coming into more extensive use by mill owners hereabouts. Eddy's large system of lights work admirably ; as also does that of Capt. Young. Its adoption by the remainder of the lumbermen is only a question of time. Messrs. Parley & Pattee intend to use it both in their large mill and on their shipping docks next season. The contract, it is said, has already been entered into.

MISCELLANEOUS.

The Quebec Lumber Co. has given notice of an application to Parliament for an Act of incorporation.

Messrs. McLaughlin Bros.' new steam mill at Arnprior has been tested and works to a charm. 200,000 feet were cut from 6 o'clock a. m. to 5 o'clock p.m. on the day of trial.

LONDON, ONT.

From Our Own Correspondent.

DEC. 10.—If it were not that Christmas is made evident by the display of prize beef and highly decorated Christmas birds, it would be almost possible to imagine ourselves in the midst of spring in this city. The season has been remarkably open, except a day now and again when we had a taste of winter, but the snow falls have been few and light.

The opinion expressed in my last letter that lumber would be higher in this market ere this letter appeared has not been verified. There seems to have been a back action at work, or the open season has effected the demand, for though it has not fallen off to any marked extent, prices are inclined downwards, and I believe some merchants have been selling at lower figures for cash, but booked accounts are charged full rates. The general tendency, however, at this date of writing, is easier, and there may be a lower list to record in my next, unless some thing not now in view turns up to stimulate the market.

The lumber contract for the new block of wholesale stores has not yet been placed, to my knowledge. The foot lights of the Holman Opera House have been finally extinguished, and the work of demolition will go on at once.

There continue to be complaints of want of proper car supply on the G.W.R. This matter should be remedied.

QUOTATIONS.

Mill cull boards and scantling	$10 00
Shipping cull boards, promiscuous widths	11 00
" " 10 and 12 in. stocks	11 50
Common boards, promiscuous widths	13 00
Scantling and joist, up to 16 ft	14 00
" " " 18 ft	14 50
" " " 20 ft	15 50
" " " 22 ft	16 50
" " " 24 ft	18 00
Common stocks	14 00
Common 2 in. plank	13 00
Cutting up plank and boards	18 00
Sound dressing stocks	17 00
Clear and picks	31 00
Three uppers, Am. inspection	35 00
½ inch dressed and matched flooring	20 00
¼ " " " " "	20 00
1 " " " " "	20 00
XXX sawn shingles, ₱ M	2 90
Lath per 1000 feet	4 00

ST. JOHN, N. B.

From Our Own Correspondent.

DEC. 7th.—Since our last report the river has frozen over, closing the internal navigation for the season, which narrows down our lumber operations in the way of shipments to comparatively small dimensions.

DEALS.

Our only source of deal supply is now from the few city mills which have logs to cut, and as those are stocked only to a very limited extent, the termination of the season's manufacture of deals is not distant. Our largest shipper, Mr. A. Gibson, is reported to have recently bought up all the deals for sale in this market (some 7,000,000 sup. ft.) at $11 per M., so that the entire stock here is now in the hands of shippers.

FREIGHTS.

The freight market is very quiet. Very little tonnage has been offering of late, and rates have improved. The following charters are among the latest transactions reported :—*Rialto*, 1,530 tons, at 58s. 9d., and *Magdala*, 278 tons, at 60s., both for Liverpool ; *Abram Young*, 756, for Cuba, at 21c., for sugar box shooks.

SHIPMENTS.

The shipments of deals and other sawn lumber are as follows :—

For Europe	7,573,000 Sup. feet.
" United States	815,000 "
" West Indies	117,000 "
" South America	572,000 "

SHIPPING.

The following is a list of the vessels in port, with their tonnage and destinations :—

Bertie Biglow, 1,142, Liverpool.
Andrew Johnson, 2,005, Liverpool.
Annie Stafford, 1,200, London.
Abram Young, 756, Cuba.
Atlantic, 412, Liverpool, Fleetwood or Barrow.
Thalassa, 228, ——
Frank Stafford, 1,169, Liverpool.
Emily Lowther, 762, Fleetwood.
Rialto, 1,530, Liverpool.
Arbela, ——, London.
Henry, 1,095, Liverpool.
Magdala, 278, Liverpool,
Etta Stewart, 787, discharging.

ALBANY.

DEC, 7th.—Quotations at the yards are as follows :—

Pine, clear, ₱ M	$53 00@63 00
Pine, fourths	48 00@58 00
Pine, selects	44 00@ 00 00
Pine, good box	10 00@ 00 00
Pine, 10-in. plank, each	00 00@ 00 44
Pine, 10-in. plank, culls, each	00 00@ 00 22
Pine boards, 10-in	00 00@ 00 00
Pine, 10-in. boards, culls	00 00@ 00 19
Pine, 10-in. boards, 16 ft., ₱ M	00 00@ 00 00
Pine, 12-in. boards, 16 ft	00 00@ 00 00
Pine, 12-in. boards, 13 ft	00 00@ 00 00
Pine, 1¼ in. siding, select	00 00@ 00 00
Pine, 1¼-in. siding, common	15 00@ 18 00
Pine, 1-in. siding, select	40 00@ 42 00
Pine, inch siding, common	16 00@ 18 00
Spruce, boards, each	00 00@ 00 16
Spruce, plank, 1¼-in., each	00 00@ 00 20
Spruce, plank, 2-in., each	00 00@ 00 30
Spruce, wall strips, each	00 00@ 00 12
Hemlock, boards, each	00 00@ 00 13
Hemlock, joist, 4x6, each	00 00@ 00 41
Hemlock, joist, 2½x4, each	00 00@ 00 16
Hemlock, wall strips, 2x4, each	00 00@ 00 10
Ash, good, ₱ M	00 00@ 00 00
Ash, second quality, ₱ M	25 00@ 00 00
Cherry, good, ₱ M	00 00@ 00 00
Cherry, common, ₱ M	25 00@ 00 00
Oak, good, ₱ M	38 00@ 00 00
Oak, second quality, ₱ M	20 00@ 00 00
Basswood, ₱ M	22 00@ 25 00
Hickory, ₱ M	35 00@ 00 00
Maple, Canada, ₱ M	26 00@ 30 00
Maple, American, per M	27 00@ 28 00
Chestnut, ₱ M	35 00@ 40 00
Shingles, shaved, pine, ₱ M	0 00@ 4 00
" 2nd quality	0 00@ 3 50
" extra, sawed, pine	0 00@ 4 00
" clear, "	0 00@ 3 50
" cedar, mixed	0 00@ 3 50
" cedar, XXX	0 00@ 3 00
" hemlock	0 00@ 2 25
Lath, hemlock, ₱ M	0 00@ 1 62
Lath, spruce, "	0 00@ 1 87
Lath, pine, "	0 00@ 2 00

OSWEGO, N.Y.

DEC. 5th.—Market for dry uppers and pickings is very fair. The demand is good for all kinds of lumber fit for sale. The assortment is very fair. The receipts are falling off, and the season may be considered about closed.

Receipts for 1881	167,000,000
" " 1880	182,000,000

The following are the quotations :—

Three uppers	$42 00@45 00
Pickings	32 00@35 00
Fine, common	20 00@25 00
Common	14 00@16 00
Culls	11 00@13 00
Mill run lots	17 00@22 00
Siding, selected, 1 inch	30 00@37 00
1¼ inch	34 00@38 00
Mill run, 1x10, 13 to 16 feet	16 00@21 00
selected	20 00@25 00
shippers	16 00@17 00
Strips, 1 and 1¼ inch mill run	14 00@18 00
Culls, selected	23 00@32 00
Culls	10 00@13 00
1x6 selected for clapboards	25 00@35 00
Shingles, XXX, 18 inch, pine	3 85@ 3 90
XX, " "	2 80@ 3 00
XXX, 18 inch, cedar	3 00@ 3 30
XX, " "	2 25@ 2 50
Lath	1 60@ 1 80

TONAWANDA.

CARGO LOTS—SAGINAW INSPECTION.

Three uppers	$40 00@45 00
Common	17 50@20 00
Culls	11 50@12 50

CHICAGO.

DEC. 7th.—The following are the

CARGO QUOTATIONS.

Joist and scantling, green, ordinary lengths	$12 00@12 25
Joist and scantling, green, 20 feet and over	14 00@16 25
Mill run, choice green	19 00@23 00
Mill run, medium, green	16 00@19 25
Mill run, common, "	00 00@14 00
Shingles, standard	2 75@ 2 80
Shingles, extra A	2 80@ 2 90
Lath	2 12½@ 2 25

BUFFALO.

We quote cargo lots:—

Uppers	$40 00@45 00
Common	17 50@20 00
Culls	11 50@12 50

THE ADVANTAGES OF MECHANICAL DRAWING.

To the Editor of the Canada Lumberman.

SIR,—Much that is taught in our schools and colleges is primarily with a view to mental training or mental discipline. Such is the case with a great part of an ordinary mathematical course or a course in the ancient classics. It is generally admitted that such studies have little or no practical bearing on any of the ordinary pursuits of life. Drawing of any kind, but particularly mechanical drawing, if viewed simply as a means of mental discipline should rank high. It incites to the habit of correct observation, gives exercise and strength to the powers of reason and reflection, matures the judgment, cultivates the taste, trains the eye, and makes the hand dexterous. A turn at good muscular exercise is about all that is wanting for the cultivation of the whole man. This is a good showing on the score of general training. But besides this by far its greatest value lies in the *practical* advantages it offers. It is a prime necessity in nearly all of the departments of art and manufacture. The economical construction of our modern high class work requires a carefully designed prearranged plan, which is usually embodied in the form of a drawing generally made to a scale—shewing the thing as a whole, with the several parts in their true position and proper relation; other drawings of portions and sectional views are also added as required. This is building up the thing on paper and has nearly all the advantages of genuine trial construction. The efficient draughtsmen then must understand the builder's art, and it follows, that to properly teach mechanical drawing is not alone to show how neat lines of geometric forms may be made on paper, but also to teach the principles of the science pertaining to some particular mechanical trade. And the workman, who learns, implants upon the basis of his already acquired manual skill a knowledge of the mechanical principles involved in the work he performs. Consequently ambitious, progressive young men, who have a very natural desire to master the theory as well as the practice of their trade, take up this study and art, for it is really both; not always with a view of becoming expert draughtsmen and following it as a life pursuit, but for the purpose of becoming better masters of their own situation. They know then not only *what* they are doing but *why* they do it. If a new drawing is placed before them to work by, they feel an acquaintanceship with that sort of thing, they not only see it but they see *through* it. They can begin the work at *once* and begin *right*, while to many engaged in the trades an average mechanical drawing is about as puzzling as a mass of Egyptian hieroglyphics.

Every man's work should contribute to his pleasure. Life at its best is dull enough, but it must be dreadfully dull to the man who for fully two thirds of his working hours has no greater interest in what he does than the pittance it gives him for daily support. He is under the curse of Adam to its full extent. I am aware that the employment of many is of such a nature that there is nothing in it to interest them. Their work is one perpetual treadmill—an endless routine soon learned and never to be forgotten.

This is all very well when the ability of the employee is just about equal to the situation, and he adds to it the grace of contentment. He needs no lessons in drawing. Such I think are somewhat excusable if with the monotonous web of their daily work a little diversion is interlaid. Active minds in such positions chafe and worry and soon leave them for others where there is scope for manual skill and mental effort. Such a man then enjoys his labor. It is to him a subject of study, and of course a matter of interest. He learns drawing to assist him in its prosecution, also for the pleasure of knowing the beautiful art.

A good knowledge of drawing is equal to a large amount of experience. Though experience is most always valuable yet it is often overestimated. Experience in doing work after clumsy old fashioned methods is a positive disadvantage, and experience even in some good methods often works a man into a rut and keeps him there. Experience is valuable when used as part of our stock of information on which we draw and apply to the matter in hand as each particular case may require.

The ability to do this—to turn things to account, to make the most of a given set of circumstances, depends most largely upon study, and the kind of study should be that which pertains to our own pursuit. Then with the knowledge of drawing we are enabled to readily give tangible form to our ideas. We express them in a universal language. Mechanics of every nation can read, understand and work by them.

Such, Mr. Editor, are some of the advantages obtainable from a study and practice of this interesting subject.

Yours, &c.,
W. H. TROUT.

The Australian Trade.

Messrs. Gemmell, Tuckett & Co.'s monthly report, dated Melbourne, Sept. 27th, states that the amount of business carried through at auction has been far in excess of the average, but prices for some lines have receded.

AMERICAN LUMBER.—The shipment ex *Haze* was placed at auction, realizing for white pine shelving £13 5s.; w. p. t. and g. ceiling, £11 2s. 6d.; clear pine, £18 7s. 6d. to £18 per M. super; the trade holding light stocks.

CANADIAN PACIFIC RAILWAY.

Emory's Bar to Port Moody.

NOTICE TO CONTRACTORS.

Tender for Work in British Columbia.

SEALED TENDERS will be received by the undersigned up to NOON on WEDNESDAY, the 1st day of FEBRUARY next, in a lump sum, for the construction of that portion of the road between Port Moody and the West-end of Contract 60, near Emory's Bar, a distance of about 85 miles.

Specifications, conditions of contract and forms of tender may be obtained on application at the Canadian Pacific Railway Office, in New Westminister, and at the Chief Engineer's Office at Ottawa, after 1st January next, at which time plans and profiles will be open for inspection at the latter office.

This timely notice is given with a view to giving Contractors an opportunity of visiting and examining the grounds during the fine season and before the winter sets in.

Mr. Marcus Smith, who is in charge at the office at New Westminister, is instructed to give Contractors all the information in his power.

No tender will be entertained unless on one of the printed forms, addressed to F. Braun, Esq., Sec. Dept. of Railways and Canals, and marked "Tender for C. P. R."

F. BRAUN,
Secretary.

Dept. of Railways and Canals, Ottawa, Oct. 24th, 1881.

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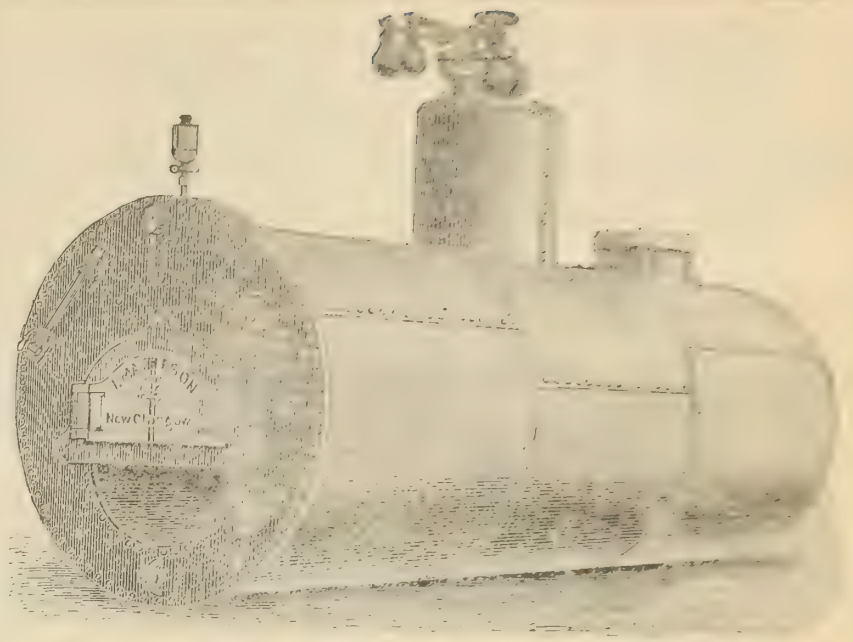

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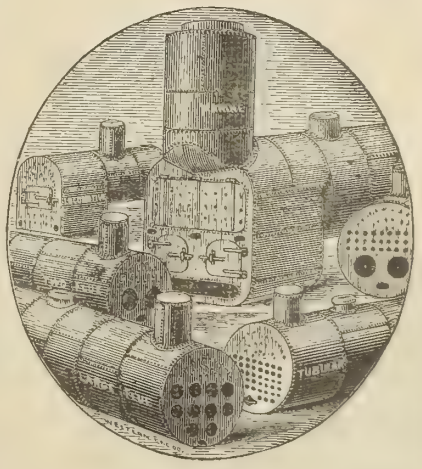

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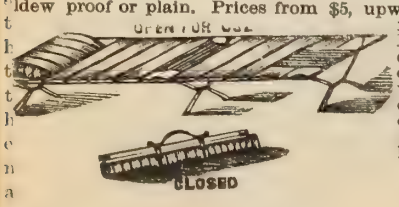

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The Best Article ever offered to the Trade.

I have much pleasure in drawing attention to my **WROUGHT IRON COOKING STOVE, for Shanty, Hotel and Boarding House use.** These Stoves are made of **Heavy Sheet Iron**, the top and lining of the fire-box being of **Heauy Cast Metal** and all the connecting parts of substantial **Wrought Iron Work.** The dimensions of these Stoves are as follows:—

SINGLE OVEN STOVE

Top surface contains six 10-inch holes, with ample room between, and one oven 16 x 24 x 26.

DOUBLE OVEN STOVE

The Double Oven has a top surface containing twelve 10-inch pot holes, with two ovens, each 16 x 24 x 26. One fire-box of suitable size for area to be heated. Below will be found Testimonials from some of the leading Lumbermen, who have used my Wrought Iron Cook Stoves since I commenced manufacturing them. They are the names of gentlemen who are well known and reliable, and will carry more weight than any recommendation of my own could do.

The Best Stove I have ever Used.

PETERBOROUGH, May 31, 1880.

ADAM HALL, Esq., Peterborough. Dear Sir,—I have used your Wrought Iron Cooking Stove in our lumbering operations since its introduction here, and have no hesitation in saying that I prefer it to any other. For durability, economy and efficiency, where a large number of men are employed, it is the best stove I have ever used. You can, with confidence, offer it to hotels, boarding houses and lumbermen.

Yours truly, THOS. GEO. HAZLITT.

The Stove for Lumbermen.

PETERBOROUGH, June 1st, 1880.

ADAM HALL, Esq., Peterborough. My Dear Sir,—We have used your Wrought Iron Cooking Stove and find it is very satisfactory for lumber operations, especially so on drives. We can recommend it highly.

Yours truly, IRWIN & BOYD.

Gives the Greatest Satisfaction.

PETERBOROUGH, June 3rd, 1880.

A. HALL, Peterborough. Dear Sir,—I have had the Wrought Iron Cook Stove, purchased from you, in constant use ever since last fall, and it gives the greatest satisfaction in every respect. I can recommend them highly to any one who is in the lumber business. Very truly yours, GEO. HILLIARD, M.P.

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All the necessary TINWARE and CUTLERY for Shanties suppied at the Lowest Prices.

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Steam Packing of all kinds, Rubber and Linen Hose, Silk Bolting Cloth, Emery Wheels, Lacing Leather (Page's Genuine), Lard, Seal, Cylinder, Spindle, West Virginia and Wool Oils. Our Stock includes Mill Supplies and Rubber Goods of all kinds. ☞ Quotations furnished for any part of Canada. 21

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It eradicates scale, and when the Boiler is once Clean a very small quantity keeps it Clean and Free from all Incrustation.
It is perfectly harmless to Iron, and emits a clear pure Steam.
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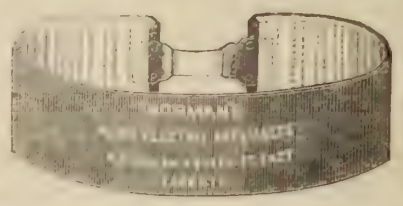
504 St. Paul Street, MONTREAL.

ESTABLISHED 1874.



ESTABLISHED 1874.

Norman's Electro Curative Appliances

RELIEVE AND CURE

Spinal Complaints, General and NERVOUS DEBILITY, Rheumatism, Gout, Nervousness, Liver, Kidney, Lung, Throat and Chest Complaints, Neuralgia, Bronchitis, Incipient Paralysis, Asthma, Sciatica, Sprains, Consumption, Sleeplessness, Colds, Indigestion.

Ask for Norman's Electric Belts and you will be safe against imposition, for they will do their work well and are cheap at any price.

A. NORMAN, Esq., WATERVILLE, N. B.
Dear Sir,—Please send me a waist belt. Enclosed find price. Head band I got for my wife has almost cured her of neuralgia. Yours truly, C. L. TILLEY.

Numerous of such testimonials can be seen at my office, proving that they are doing a good work and worthy the attention of all sufferers. Circulars free. No charge for consultation.

A. NORMAN, 4, Queen Street East, Toronto.

N.B.—Trusses for Rupture, best in America, and Electric Batteries always on hand at reasonable prices. L17-1y

LUMBERMEN

Will always find a Large Stock of

Shanty Blankets

AND

HORSE BLANKETS

At LOWEST Mill Price, at

JNO. MACDONALD & CO'S

TORONTO.

☞ *Send Sample Order for our LINED SHAPED HORSE RUG, a Specialty, highly recommended for Wear and Warmth.* 6L22

WILLIAM CAMPBELL

(Late CAMPBELL & FOWLER.)

MANUFACTURER OF

Edge Tools, Axles, Springs,

&C., OF EVERY DESCRIPTION.

L24 1y

Robertson Place, Smythe Street - ST. JOHN, N.B.

The Best Axes in the World!

Single, Double and Triple Steel.

Warranted Good or Exchanged.

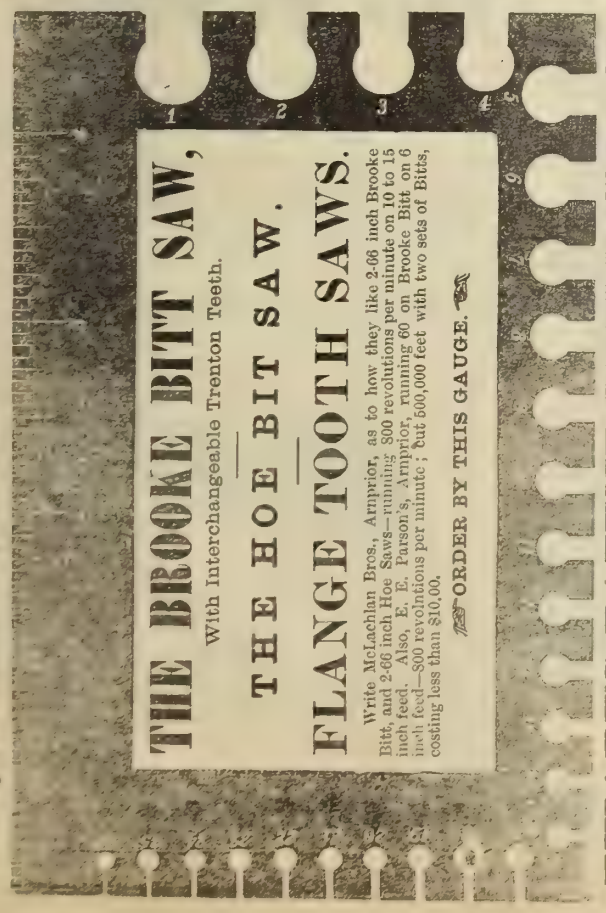
Also Dunn Edge Tool Company's and best Canadian Axes, repacked any weights without extra charge. Lindsay Pattern of Broad and Blocking Axes. LANCE TOOTH SAWS, warranted good. Timber Lines and Chalk. Stable Shovels, Forks and Brooms. 2d CUT FILES. Heavy HAMES, BUCKLES and HARNESS TRIMMINGS, Curry Combs and Horse Brushes. Sleigh Shoe Steel from ¾ to 3 inches wide. Best proved Coil Chain from ¼ to ⅝ inches. Blacksmith's Bellows, Anvils, Vises, Drills, Horse Nails and Shoes. A large Stock of Iron and Cast Steel.

☞ Winchester, Sharp's and Ballard Rifles and Cartridges.

GEORGE STETHEM, Peterborough, Ont.

Importer, Jobber and Retail Dealer in Hardware. 12L17

HEADQUARTERS FOR INSERTED TOOTH SAWS!



THE BROOKE BITT SAW,

With Interchangeable Trenton Teeth.

THE HOE BIT SAW.

FLANGE TOOTH SAWS.

Write McLachlan Bros., Arnprior, as to how they like 2-66 inch Brooke Bitt, and 2-66 inch Hoe Saws—running 800 revolutions per minute on 10 to 15 inch feed. Also, E. E. Parson's, Arnprior, running 60 on Brooke Bitt on 6 inch feed—800 revolutions per minute; cut 500,000 feet with two sets of Bitts, costing less than $10.00.

☞ ORDER BY THIS GAUGE. ☜

EWART'S PATENT DRIVE CHAIN

FOR SAWDUST CARRIERS, LIVE ROLLS, TRIMMERS and REFUSE CARRIERS.

BROWN'S PATENT SPALT MACHINE

Cuts three perfect Shingles out of inch board. Cuts Shingles out of slabs and all manner of refuse. Will soon pay for itself around any large Mill.

AUTOMATIC GANG TRIMMERS, SIX SAW EDGERS, and the most Improved Saw Mill Machinery. PORTABLE SAW MILLS OUR SPECIALTY.

Address, WATEROUS ENGINE WORKS CO., Brantford, Canada.

Flour Making by the New Process

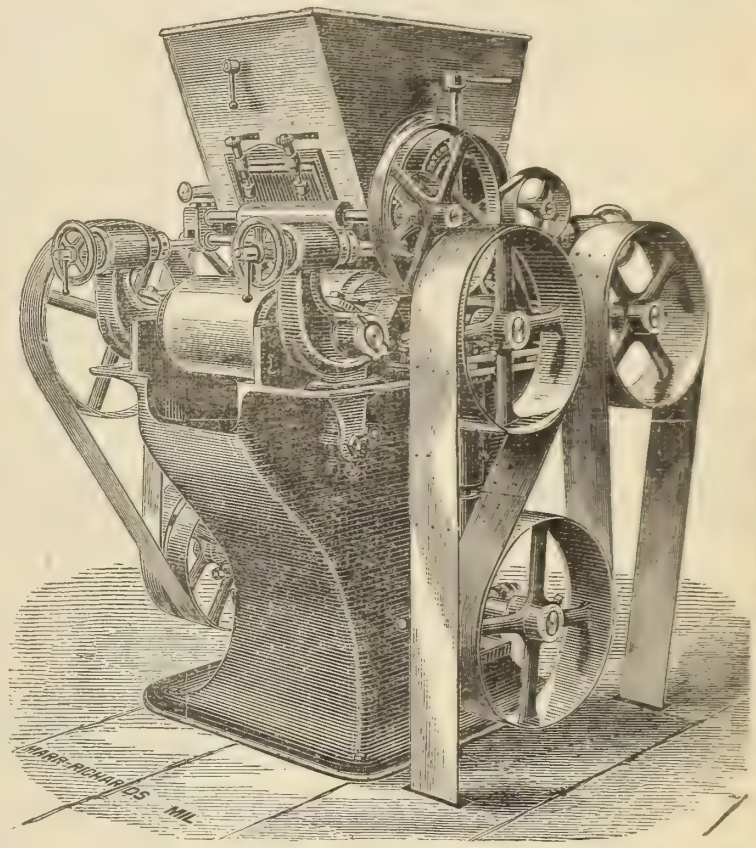
GRAY'S PATENT

NOISELESS ROLLER MILL

A Model of Perfection!

Every Mill a Success!

CORRUGATIONS of all Descriptions. Smooth Iron or Porcelain ROLLS.



These Roller Mills are used by all the Representative Millers of the United States.

The Machine is Perfect in all its adjustments, and RUNS WITHOUT NOISE.

It is doing Better Work than any other Machine in use.

Automatic Lubrication of Principal Bearings.

Driven entirely by BELTS.

Differential Speed always insured.

WEYMAN'S NEW IMPROVED PATENT

Porcelain Rolls

The BEST ROLL FOR MIDDLINGS in the world. Over 6000 in use in this country and Europe. Send for particulars.

MILLER BROS. & MITCHELL,

Nos. 110, 112, 114 and 116 KING STREET

MONTREAL.

SOLE LICENSEES FOR DOMINION.

Manufacturers of Improved Hoisting Machinery, MINING and CONTRACTORS' PLANT. Importers of BEST STEEL WIRE ROPE. Mention this Paper. L24-1y

EMERY WHEELS FOR SAW GUMMING!

Solid Emery Wheels are now almost in universal use for the purpose of gulletting and gumming saws. Statistics show from 25,000 to 30,000 saw-mills in the United States. Many of these run only a single saw each. A one-saw mill would use one or two wheels a year, costing $3 to $4 each, and when such small mills order single Emery Wheels from the factory, the express charges often equal the cost of the wheel. There was a time when the quality of Emery Wheels was so uncertain, and the demand so fickle, that storekeepers could not afford to carry them in stock. Now, however, Saw Gumming Wheels have become as staple an article as Files, and every dealer in saws, Hardware and Mill Supplies can afford to carry a few dozen standard sizes in stock. Large dealers order stocks of $500 to $750 worth at a time. Saw Gumming Wheels are used with the edge (or face) square, round or beveled. Probably seven-eigths of all in use are beveled.

The principal sizes are:

8x¼, 8x⅜, 8x½ — ⅜ in. hole.

10x¼, 10x⅜, 10x½, 10x⅝ — ⅜ in. hole.

12x¼, 12x⅜, 12x½, 12x⅝, 12x¾, 12x⅞ — ⅜, ⅞ and 1 inch. Holes,

Probably more wheels 12x⅜, 12x½ and 12x¾ are used than all the other sizes together. Saw Gumming Wheels are used, however, of all sizes up to 24x1½. The most frequent complaint is that Emery Wheels harden the saw so that a file won't touch it. The answer is that you don't want a file to touch it. An expert workman will shape and sharpen the teeth with an Emery Wheel, leaving the teeth *case hardened*, in which condition the saw will cut about 33⅓ per cent. more lumber than a soft saw will. Those who want to use the file, however, have only to touch the saw *lightly* a second time (after going all over it once), and this second touch will cut through the case-hardened scale.

A QUESTION OF QUALITY.

Thirteen years of experience as makers of, dealers in, and actual users of Emery Wheels, have led us to a decided opinion as to what quality is the best. We prefer for almost every use an "Extra Soft" wheel like the "Pocono." We believe that money lost through the rapid wear of the wheel is more than made up by the money saved on wages. As we cannot get every one to adopt our views, we make several qualities, so as to meet their views. We say to those who think they can only be satisfied with some other make of wheels (not Tanite), that we can furnish qualities *to match* any and every other make. If you have got used to some special quality of wheel, let us know what it is, and we can send you *a Tanite Wheel of similar quality*. Our *regular* classification of Saw Gumming Wheels is as follows:

CLASS 2. MEDIUM—HARD.—This Wheel is THE STANDARD Saw Gumming Wheel all over the world. Probably seven-eighths of all the Saw Gumming Wheels used are "Class 2. It cuts fast and keeps its shape well. Some think it too hard, some too soft. We prefer the "Pocono."

CLASS 3. MEDIUM—SOFT.—The same as to coarseness and fineness as "Class 2," but a *softer*, and therefor freer cutting wheel.

CLASS "POCONO." EXTRA SOFT.—This Wheel we prefer to all others. It is both *finer* in grain and softer than either of the above. As a Saw Gumming Wheel, Class "Pocono" is specially suited to those practical and experienced Sawyers who know how to grind with a light touch, and who want a free cutting wheel that will not create much heat.

Illustrated Circulars and Catalogue, showing Cuts of Saw Gumming Machines, and Shapes, Sizes and Prices of Wheels, sent free on application.

L13

The Tanite Co. Stroudsburg, Monroe Co. Pennsylvania

CANADIAN TRADE SPECIALLY SOLICITED.

M. Covel's Latest Improved Automatic Saw Sharpener!

Is the Most Perfect Machine that has ever been Introduced into Mills for that purpose.

CIRCULAR SAW STEAM FEED!

I would also call special attention to my

Heavy Circular Saw Mills

and for STEAM MILLS, would recommend the Steam Feed, having put in several which are giving the best of satisfaction, as will be seen by the following testimonials:—

GRAVENHURST, August 20th, 1880.

WM. HAMILTON, ESQ., Peterborough.

DEAR SIR—I have used your Steam Feed for near four months, and it has given me perfect satisfaction in every way; it is admitted by every person who has seen it work to be the best feed ever invented. Since I put it into my mill, I have not lost ten minutes time fixing anything belonging to it. I can cut 18 boards 13 ft. long in one minute. It can do much smoother and better work than the pinion feed. It is easily governed and reverses the carriages instantly. I am thoroughly satisfied with it and can recommend it to any person who has a Circular Saw Mill for cutting long or short logs. I consider I have cut more lumber than will pay for the Steam Feed since I got it than I would have cut had I not put it in.

Yours respectfully,

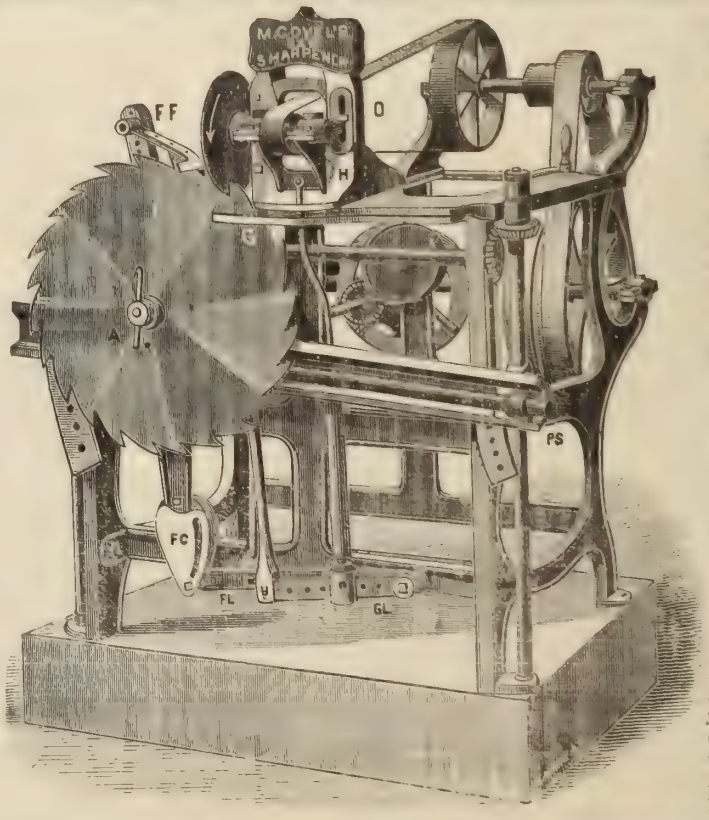
WILLIAM TAIT,
Lumberman, Gravenhurst.

TORONTO, August 11th, 1880.

WM. HAMILTON, Peterborough, Ont.

DEAR SIR—The Steam Feed you put in is working splendidly. Yours, &c.,

THOMPSON, SMITH & SON.

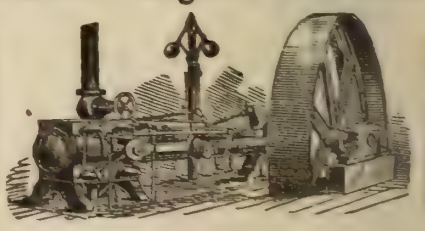


MILL MACHINERY!

I am also manufacturing Saw Mill Machinery, for all sizes of Gang or Circular Mills, Span or Double Circulars for Slabbing Small Logs. My Patent Jack Chain for drawing logs into Saw Mills, acknowledged by all to be the Cheapest and best ever got up; also, my Patent Lumber Markers, different sizes of Edgers, Gang Lath Mills, Trimmers, Power Gummers, and all Machinery used in a first class Gang or Circular Saw Mill; also, small Hand Gummers for use in the woods, for Cross-cut Saws. Rotary Pumps of different sizes, for Fire Protection in Mills, &c.

Horizontal Engines and Boilers

CORLISS ENGINES



Where economy of fuel is the great consideration, along with uniformity of speed, such as is required in Grist and Flouring Mills, Woollen and Cotton Factories, or large Factories of any kind, I supply the Corliss Engine. I feel justified in saying that our Style, Workmanship and Finish on this Engine will be no discredit to its renown, and certainly is not equalled in this country for economy of fuel. I have them working at 2½ pounds of coal per horse-power per hour.

L10

WILLIAM HAMILTON,

PETERBOROUGH, ONT.